California GARDEN

SINCE 1909 | AUGUST - SEPTEMBER, 1965 | VOL. 56, NO. 4

SILVER ANNIVERSARY DAHLIA SHOW

AEONIUMS

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DESERT FLORA

CARNATION FESTIVAL

COUNTY BUILDING LANDSCAPE

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FLORAL EVENTS

AUGUST-SEPTEMBER, 1965

SAN DIEGO FLORAL ASSOCIATION PROGRAMS
Third Tuesday, 8 p.m., Floral Building, Balboa Park
Chairman — Mrs. Edward Penprase

Regular Meeting, September 21, 1965

Mr. Lloyd T. Lowrey, General Park Superintendent, Balboa Park will talk on Street Trees, and show some slides. There will also be a Question and Answer period.

Flower Arrangement Classes at the Floral Building, Balboa Park
For information call Mrs. Roland Hoyt, Chairman, 296-2757

Flower Arrangement Demonstration Class, 9:30 a.m., September 27, 1965.
Instructor: Mrs. J. R. Kirkpatrick

Plans for additional classes are under way and will be announced later. If you are interested in a special subject, call Mrs. Roland Hoyt and discuss it with her. Classes may be formed whenever enough people show interest for continuing attendance.

AUGUST	**FLOWER SHOWS**	
7- 8	DAHLIA SHOW, 25th Annual Silver Anniversary Sat. 2-8 p.m., Sun. 10-6 p.m.	CONFERENCE BUILDING, BALBOA PARK San Diego County Dahlia Society
21-22	INGLEWOOD DAHLIA SHOW, 34th Annual	CALIFORNIA NATIONAL GUARD ARMORY 111Grosvenor St., Ingelwood
24-29	SAN DIEGO CARNATION FESTIVAL, 1st Annual	COMMUNITY CONCOURSE EXHIBIT HALL Horton Plaza and all over San Diego San Diego Downtown Association
26-29	ANNUAL FLOWER SHOW	HALL OF FLOWERS, GOLDEN GATE PARK San Francisco Co. Fair Flower Show
SEPTEMBER		
1	LOS ANGELES GARDEN CLUB GUEST DAY Color in your Garden, by Maria Wilkes	WOMEN'S UNIVERSITY CLUB 540 S. Catalina St., Los Angeles
4- 6	BEGONIA AND SHADE PLANT SHOW	L.A. STATE AND COUNTY ARBORETUM 301 N. Baldwin, Arcadia

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APPRECIATION

There comes a time with all projects for recapitulation and review, with a kind of digest of results. This is in order now for the Floral Association's classes in Flower Arrangement, and in summing up the benefits to individuals as well as to the association as a whole, the team of Kirkpatrick and Schoeneman stands out.

Here has been a contribution of unusual merit and quality, Mrs. Kirkpatrick in design and presentation with Mrs. Schoeneman carrying the horticultural ballast that must be a part of any successful course of study. For twelve years, now, year after year, this pair has given of their knowledge and talent for the advancement of our study group. With varied and attractive presentation they have raised the sights and appreciation of our increasing student body. Not only this;—the publicity and quality of instruction, has brought new and active members to our gardening group with a not inconsiderable support to CALIFORNIA GARDEN in subscriptions.

The year-end reception and party at the home of Mrs. Kirkpatrick in Vista is the high point of the class year. We are grateful.

Among Our Contributors

Larry Sisk, with the *Union Tribune,* finds his hobby in dahlia growing. He is nationally known as an outstanding grower and originator. His many awards and tropies cover a number of years of successful entries at Dahlia Shows.

Dr. Reid Moran is Curator of Botany at the Museum of Natural History, Balboa Park. He has a special interest in the flora of lower California, and in cacti and crassulaceae.

Dr. Lovisa C. Wagner is Professor Emerita, Child Development, Mills College, Oakland, California.

John M. Tucker is Professor of Botany at the University of California Davis Campus.

M. H. Kimball is now a retired Agricultural Extension Service Ornamental Horticulturist.

Bruce Asakawa, of the Presidio Nursery, and his father, have long been associated with Oriental horticulture in San Diego.

Janet Richards, former Editor of *California Garden,* is extending her garden influence with benefit to the community where she and her family live.

Virginia R. Perkins is the daughter of Alfred D. Robinson, Founder and first President of the Floral Association.

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CALIFORNIA GARDEN

August - September, 1965

Vol. 56 No. 4

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A BOOK IN THE HAND

by Alice Mary Greer

Books reviewed in these columns are available for reference and circulation in the Mary A. Greer Memorial Library, Floral Building, Balboa Park. Open to members of the San Diego Floral Association.

Shore Wildflowers of California, Oregon and Washington. **Philip A. Munz, University of California Press, 1964. 122 pp. Paper, $2.95; cloth, $4.75.**

We find in this book a presentation of many wild plants not treated in the average wildflower book — the curious and often inconspicuous plants of the salt marshes and coastal dunes. Some trees are handled and some ferns.

Drawings and color plates for 96 species are grouped by color. This helps the reader to identify his specimens. Most of these drawings, which are happily placed on the margins, and which so successfully convey the three dimensional characteristics of specimens, are the work of the well-known botanical artist, Jeanne Janish.

Although Dr. Munz, of the staff of Rancho Santa Ana Botanic Gardens, Claremont, California, writes primarily to help the layman identify the wild plants and to understand their relationship, the reader seeking technical and scientific knowledge and wishing to do a bit of research, finds these publications helpful. Dr. Munz writes with clarity and the organization of ideas that his experience as a college instructor of the "seeking mind" has developed. A scientist working in optics or a colorist would revel in Dr. Munz's classification by color. Here they are—Flowers yellow to orange; red to purple; blue to violet; whitish to greenish. Those who have Dr. Munz's three other "wildflower books" will welcome this fourth in the series and look forward to others that may follow. Don't you feel an urge to step into a field of Meadow Rue or Lupine or Lasthenia?

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Surely there is an affinity between horticulturists, flower arrangers, creative craftsmen and casual conchologists, for each one tiptoes into the realms of beauty, of design and of just plain fun! Read ***Shell Art,*** **Helen Krauss, Hearthside Press, 1965; 128 pages; $6.95.**

Helen Krauss gives delightful instructions for making shell flowers and for assembling them into exquisite bouquets, even for designing animals and dolls, for making shell jewelry, montages, handsome seascapes, mosaics and shell sculpture. In fact, some of the author's own work with shells was created for the palace in Monaco. Some of her designs are parts of valuable art collections.

Her work differs from the usual commercial type in that her arrangements are botanically correct, for her earliest interest was the study of botany. Later, as her study of shells developed, she traveled widely in foreign countries to add to her scientific collection. Victorian shell flower arrangements and mosaics fascinated her and led her to revive an almost lost art.

Currently there is a revival of interest in the Victorian art of making flowers of natural colored sea shells, which in the Victorian era were constructed with great care and closely resembled their terrestrial counterparts. Some of these past-era shell bouquets are seen today in private collections and in museums, protected under rounded domes of various sizes or, in France, by rectangular glass cases.

Undoubtedly it was Helen Krauss's deep knowledge of botany and her skill at artistic work—she studied at Hunter University, New York University, and the University of Washington at Seattle—that enabled her to imitate with almost perfect adherence to botanical detail more than one hundred species and varieties of flowers.

What she can do, other kindred spirits can do. Read this very meaningful manual of instructions and step to the fore with shell-flower creations.

Me 'N' Zebediah, **Arthur F. Otis, published by the author, San Diego, 1965. 64 pages, paper, $1.**

A good garden requires solitary, silent hours of toil. Possibly for that reason the gardener likes nothing better than a companionable gossip over the back fence. It is this chatty, old-clothes quality which Arthur F. Otis brings to his weekly garden column in the *San Diego Union.* This collection in book form of twenty-one of his favorite columns has the charm of neighborliness, a fair share of wise counsel for the new San Diego gardener, and enough odd and interesting sidelights to keep even the veteran plantsman reading with curiosity and delight.

These are cautionary tales. The author's avowed purpose is to help the newcomer to Heaven-on-Earth avoid some of the pitfalls awaiting the transplanted Midwestern or Eastern gardener. Pitfalls there are aplenty and Otis has fallen in them all. He takes a commonplace incident such as an encounter with a strange bug or a shovel jabbed through a plastic sprinkler pipe, ruminates on some odd quirks of human nature (his own being the lab specimen under examination), dips into Bailey's Cyclopedia or Sunset Western Garden Book for a dash or two of arcane lore, stubs his pen on a few botanical names and comes up with entertainment. As is the case with the best teachers, the education involved is painless. Numerous cartoons by Bob Fassett add to the fun.

As an advertising man and a persistent practitioner of light verse, Arthur Otis has had a lifelong affair with printer's ink. Now the ink under his fingernails is mixed with a good grade of sandy loam. It's a pleasant combination.

George A. LaPointe
Guest Reviewer

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FEROCACTUS

Second in a Series of Articles Concerning the Native Cacti of San Diego County

by R. Mitchel Beauchamp

ONE of the early childhood experiences which I recall most vividly was a very painful encounter with what is commonly called the Devil's Pincushion. Like most children at the time I preferred walking barefoot through the vast acreage of virgin chaparral. This sanguinary experience with this low-growing native cactus was enough to make shoes become the vogue.

This particular Devil's Pincushion is more precisely known as *Ferocactus viridescens*. This member of the Cactaceae is taxonomically listed as a barrel cactus. Because of its habit of growing very near to the ground level and hiding among the rocks it has been assigned the "official" common name of Hidden Bisnaga. The latter portion of the appellation is of Spanish origin and is applied to the barrel cacti.

The type locality of *F. viridescens* was given in 1836 as being the arid hills and coast near San Diego by Nuttall. Dr. Thomas Nuttall was the first botanist to give the San Diego County flora a thorough examination and for this reason his name is affixed to the end of the scientific name of many of our native plants.

Ferocactus viridescens is very plentiful in the county when related to the other native cacti. Mrs. Ethel Bailey Higgin's "**Annotated Distributional List of the Ferns and Flowering Plants of San Diego County, California**" lists known localities thus: "Dry hills near the coast about San Diego: near Boundary Monument No. 258 (13297); also hills above Rose Canyon and on Kearny Mesa." The bracketed number represents the specimen in the herbarium of the Natural History Museum. The distribution of this common Coastal Barrel Cactus extends southward into Baja California where its form becomes more varied and mixes with other species that have taken over the peninsular landscape. Its northern limit reaches as far as Escondido. *F. viridescens* has a littoral or coastal habitat and goes inland only at low elevations throughout its longitudinal range. This range description is very general as with most biological organisms but a few exceptions exist.

The cactus is unusually simple or solitary in its growth but branching occasionally occurs at the base of the plant and gives the effect of a large clump. The average plant is globular and about six inches in height but with favorable conditions a specimen may reach one foot. The plant is well armed with a covering of cross-ribbed spines. The spines are not barbed but can be as vicious as a rusty nail. As proof of their capability; my one-and-a-half year-old brother fell on a *F. viridescens* in my garden. I saw only scratches on his arm but upon further examination my father found a spine completely imbedded that was one half inch in length.

One of the more pleasant aspects of *F. viridescens* is its flower. Flowers appear from April to July and are greenish-yellow or viridescent in color; hence the specific name "viridescens." Botanically the fruit is a berry varying in color from red to yellow and covered with shiny, lunate, membranaceous scales. The fruit looks very delicious but like beauty the delicacy is only skin deep for inside this ripened ovary is a large mass of black seeds which, personally, I would remove before sampling the terribly sour morsel.

For those interested in observing *F. viridescens* I can suggest locations where one will undoubtedly find this cactus. In the South Bay area the bank along the left side of Sweetwater Road, as one heads east toward Bonita from its junction with the Spring Valley Freeway, has many fine specimens. You will have to climb in order to find them on the rather steep hillside but for the less enthusiastic, there are labeled plants on the nature trail at the Cabrillo National Monument.

Photograph by Yosh Maki

Santa Barbara Botanic Garden

The Desert Section

by Jacqueline P. Broughton

PLANTS from the arid regions of California are now in bloom in the Desert Section of the Santa Barbara Botanic Garden. Although the Santa Barbara climate is not favorable for all desert material, many plants from the less extreme regions thrive and flower profusely in this dry, exposed section of the Garden.

Here, among the native sandstone boulders, are cacti, desert trees and shrubs, and a variety of colorful wildflowers. Two large Fremont Cottonwoods, typical of streamsides in the California deserts, shelter the south end of the section. *Acacia farnesiana,* Sweet Acacia, with its tiny yellow-green leaves and balls of bright yellow flowers, and Palo Verde, *Cercidium floridum* are prominent and attractive trees in the area.

Among the many impressive plants are large clumps of *Nolina parryi,* a yucca-like plant with long, narrow, basal leaves and tall, much-branched flower stalks covered with creamy white flowers. Also on view is the purple form of *Yucca whipplei.* The yucca collection also includes the newly acquired Joshua Trees which dominate the center of the section.

Several cacti are now in flower, displaying their large blooms with waxy petals. The Prickly Pears are bearing large, red fruits as well as attractive yellow flowers. The Grizzly Bear Cactus, Cottontop Cactus, Fishhook Cactus, and several species of Barrel Cactus as well as Jumping Cholla are also on view.

Desert shrubs such as Cat's Claw, Cliff Rose, Creosote Bush, Desert Sweet, and Apache Plume provide a background for the colorful wildflowers. Now blooming are Radiant Daisy, Prince's Plume, Spharalcea, Mirabilis, and several species of the genus Penstemon.

Desert plants with their many and often bizarre adaptations to arid regions, provide a sharp contrast to the native vegetation of coastal California. At the Santa Barbara Botanic Garden, which is devoted entirely to California plants, you will have an opportunity to see and compare plants from a wide variety of California environments. The Garden is on Mission Canyon Road, one and a half miles north of the Old Mission, and is open every day from 8:00 a.m. until sunset.

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CALIFORNIA GARDEN MAGAZINE

San Diego Carnation Festival

August 24 to 29th will see the inauguration of San Diego's First Annual **Carnation Festival** with a week of activities centered around our City Flower. A San Diego County Art Exhibition and the National Finals of the Mrs. America Contest (which will also be held here annually) are the threefold attractions of this first City Festival that will evenutally rival the Portland Rose Festival and other nationally known pageants of color.

The carnation was adopted as our official City Flower by the City Council a year ago and plans for the Festival have been under way ever since. Pictorially the carnation exhibits stunning flower effects, whether held by a central figure or arranged in background containers for civic and local events. It is available throughout the year, here, and it lends itself to both amateur and professional arrangements. It is grown in twelve colors, including tangerine and orchid and variegated which match or blend with any decor.

The production of carnations is a two-and-one-half million dollar industry in San Diego County. More carnations are grown in this county than any other cut flower, and they are shipped as far away as Sweden.

This city wide jubilee week will feature daily special events:

Monday, Aug. 23. Design in Bloom will feature floral arrangements made by each Mrs. America contestant. These will be displayed in downtown shop windows with a picture of the contestant.

Tuesday, Aug. 24. Exposition of Arts and Flowers. A county wide Art Exhibition, in the Exhibit Hall of the Community Concourse, will show more than 500 works of art, both conservative and modern, highlighted by floral arrangements of carnations by county florists.

Wednesday, Aug. 25. Flower Hat Day in the Palm Room of the U.S. Grant Hotel. This parade of elaborate headdresses decorated with living flowers, on live models has been re-scheduled to make it a part of the festival. Also, volunteer Youth groups will insert thousands of fresh carnations into four feet high styrofoam letters spelling out **SAN DIEGO CARNATION FESTIVAL.** These letters will be hung on the railing of the Concourse where it is easy to see and to photograph them.

Thursday, Aug. 26. Downtown Sights and Sounds. Horton Plaza will be transformed into a floral park with large concrete urns of living carnations. Gaily striped awnings will cover the greens, where artists will be painting. Colorful Parisian kiosks will house Carnation Girls from whom carnation boutonnieres may be obtained. While viewing the daily entertainment beside the decorated fountain one may sip soft drinks at the Sidewalk Cafe beside the U.S. Grant Hotel.

Friday, Aug. 27. Festival del Clavel. saluting our Latin American neighbors; with music, dancing and entertainment provided by outstanding groups from south of the border.

Saturday, Aug. 28. Promenade Day. Fashion Promenade and Coiffeur Promenade, at which local shops, and beauty salons will show Fall fashions on the stage at Horton Plaza.

Programs featuring all types of music and dancing will be daily features.

A colorful new Carnation Flag for use in the Festival and for city events, was designed by artist Geoff Relf at the request of Mrs. Alice Zukor, General Chairman. These will be hung as an Avenue of Flags from street light poles.

Mr. Ed Frank of Encinitas has arranged with the North County carnation growers to donate 50,000 blooms to enhance this first Carnation Festival and the Mrs. America pageant. Stated Mr. Gordon Luce, President of the Downtown Association, "We are deeply indebted to all of the growers for this wonderful spirit of civic enterprise reflected in the willingness they have shown to participate so whole-heartedly in this first Festival honoring the carnation. We feel that this kind of cooperation shows the true spirit of San Diego as a widespread community that can pull together to get a big job done."

There Are Thrills in Growing and Showing Dahlias

by Larry Sisk

DAHLIA displays at fairs, flower shows or dahlia society exhibits represent a wide choice of types and spectacular colors of an easy-to-grow flower. Each bloom, grown to a point of exhibition perfection, represents a thrill for its grower.

The dahlia is a native of North America, found in the highlands of Mexico by the Spanish explorers.

Originally it was an open-centered flower of one or two rows of petals. After it was taken to Europe, the dahlia was developed into today's lovely forms by botanists and devoted growers, and named for one of the botanists, Andres Dahl of Sweden.

Men gardeners especially like the dahlia. The choice of colors and sizes provides just the right rewards. The large ones—the bigger the better—supply an extra thrill.

Women gardeners also like the dahlia for the same reasons, and also because of the flower's versatility. Dahlias make good cutflowers, and are easy to work with, for arrangements.

Who are the exhibitors? Almost all exhibitors at the shows are amateurs who grow dahlias as a hobby. They are divided into sections according to their show experience and according to sweepstakes winnings.

The **Novices** are new exhibitors, and then come the **Amateurs** and **Advanced Amateurs.**

Usually there is another section, **Open-to-All,** which is open to Novice and Amateur exhibitors in addition to commercial growers. For some amateurs, competing with and winning over the commercial growers in the Open-to-All classes provides extra thrills.

How dahlias compete. The schedule for the annual show, August 7 and 8, of the San Diego County Dahlia Society, provides for exhibits according to size, color and form.

The large "A" classes are for blooms eight inches or more in diameter; medium, "B" classes, six to eight inches; florist or "BB" classes, four to six inches, and Miniature classes up to four inches. Pompons are no more than two inches.

Types are formal decorative, informal decorative, cactus, semi-cactus, and ball. Pompons over two inches are called miniature balls, up to four inches, and from four inches and up they become balls.

The classes for laciniated dahlias are for blooms that have petals which are split or notched at the end.

The seedling classes. Dahlia varieties are reproduced by roots only. Each seedling is a new variety. Because of this, the seedling classes at dahlia shows are important. Only the best seedling blooms are exhibited. From the winners come the new varieties that gardeners of tomorrow will be growing.

Seedlings usually compete in separate classes, according to years planted, and kept by saving the roots. Undisseminated classes are for seedlings of various ages that have not been distributed commercially.

At the show in Balboa Park's Conference Building and other nationally affiliated shows, the most important seedlings are those competing in the **American Dahlia Society Seedling Sweepstakes** class. These must be three years or older, with three blooms of the same variety shown. These seedlings must score 85 or more out of a possible 100 to be accepted for national recognition. The variety scoring highest over 85 wins additional Achievement honors.

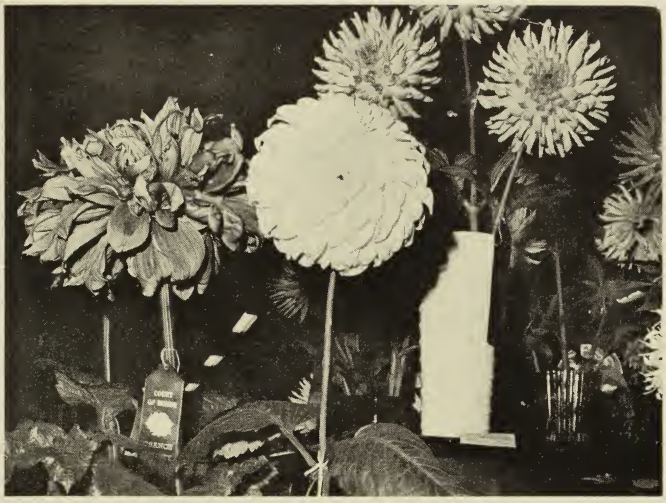
Many of the world's most famous dahlias have been grown in San Diego and California, and have had their first showing in the Seedling Sweepstakes competition at the San Diego shows.

Famous San Diego Dahlias. To name a few of those varieties still available, here are some that have fared well in competition all over the world . . . **Five Star General, Miss San Diego, Maureen Connolly, Princess Diane, Hazel Harper, Mr. President, Art Linkletter, Groucho Marx, Mouney C., Helen Hayes,** and three varieties that have been top competitors all over the world in the last 10 to 12 years. These are **Florence Chadwick, First Lady,** and the current biggest-in-show, **Lula Pattie,** all originated by the internationally-famous San Diego hybridizer, R. Paul Comstock.

The featured San Diego show dahlia this year is a white medium-sized formal named **Sterling Silver.** It is in commerce for the first time this year, originated by William Eichman of Solana Beach.

As the current dahlia show is the 25th annual exhibition by the San Diego society, **Sterling Silver** was selected for a separate Silver Anniversary class with all growers ecouraged to grow and enter blooms of the variety.

How dahlias are judged. Dahlias are judged flower-against-flower in each specimen class, and against per-



World-famous San Diego dahlia *First Lady*, grown by Larry Sisk. Yellow formal, 8 inches across.

fection and for distinctiveness in the seedling classes. Color is most important. Other characteristics judged are form, foliage, and stem, of next importance; substance and distinctiveness; bloom position, and uniformity in multiple-bloom entries. The largest and smallest classes are judged by additional special size factors.

The judges are experienced growers who have attended judging classes, and who have been accredited according to ability by the American Dahlia Society.

Dahlia arrangements are judged according to design, interpretation of theme, color, distinction and originality, relation to container, and condition of flowers. Arrangements judges are selected on a basis of their experience.

THE COURT OF HONOR. The best flowers in most shows are placed in a Court of Honor.

Each size class and each exhibitor section are represented.

Before arriving at the Court of Honor the various blooms will have won blue ribbons, trophies, medals or other awards.

Remaining on the Section tables are many other excellent flowers that will have won trophies and other high awards.

To get the full enjoyment of a dahlia show or any flower exhibition, be sure to visit each table and look at each entry, checking the most appealing with the show schedule.

If you have questions, ask one of the judges or show officials. To get greater enjoyment out of flowers, know more about them.

Dahlias are easy to grow. You don't have to be an expert to grow and exhibit fine dahlias. They will thrive in average garden soil and with average garden care. The better the care, the better the rewards in flowers.

Obtain dahlia roots from nurseries, from seed company catalogs, from dahlia specialists advertising in gardening magazines, or from other dahlia growers.

For best results, plant only named varieties. Plant roots of the large varieties to get large blooms, and roots of other sizes—or the novelties—to get the dahlia flowers desired.

Prepare the planting bed or location in the fall or early spring by turning the soil about 12 to 18 inches deep. When ready for planting in the spring, (from mid-March on,) mix steer fertilizer with the soil, about a spadeful for each plant. A handful of bonemeal or superphosphate also added for each plant will make better flowers. Mark each plant location with a stake to which the plant can be tied for support as it grows. Plant two to three feet apart.

Place the root six to eight inches deep, with its eye or sprout up, and about two or three inches from the stake, and cover with soil. If the soil is dry, water just enough to keep the soil damp until the plant emerges and leafs out. Thereafter water when the top of the soil is dry, usually about once a week.

Spray with insecticides. Feed with low-nitrogen fertilizers about the same as for vegetables and other flowers.

When the plant has three sets of leaves, nip out the tip to make it bush. Disbud and disbranch to obtain larger flowers. Usually there are three buds on each stem. On plants of all varieties except the smaller ones, two of the buds should be removed, leaving the center one. The more buds and flowers left on each plant, the smaller the dahlias will be.

Dahlia roots are kept from year to year by digging them in late fall, placing them in containers, and storing them in cool places where they will not be dried out by air currents.

Visit the shows to see how dahlias should be exhibited—as single specimens,—in threes, vases, and in the many beautiful arrangements.

Join the Dahlia Society. For the most pleasure out of growing dahlias, join the Dahlia Society. The members are just amateurs like yourself, persons who like to garden and who love flowers.

Twenty-Fifth Annual Dahlia Show

by Larry Sisk

SAN DIEGO'S dahlia show, staged annually in Balboa Park's Conference Building, ranks with that of Washington, D.C., and Chicago as the largest in the nation. Not only does it exhibit top-quality blooms because of the favorable climate, but it is the first of the established American Dahlia Society shows each year.

Show dates are Saturday and Sunday, August 7 and 8. Show times are 2 to 8 p.m. the first day, and 10 a.m. to 6 p.m. on Sunday.

This is the Silver Anniversary show, the 25th annual staged by the San Diego County Dahlia Society.

Among the 60 to 75 exhibitors expected will be growers from all of the Southern California counties, and from as far north as Santa Cruz. They are expected to enter many more blooms than last year's 55 exhibitors, who staged about 4,000 flowers in 1276 entries.

In addition, a larger arrangements section is expected to top the record of 118 entries by 34 exhibitors last year.

Victor Kerley is president of the dahlia society, with Mrs. R. M. Middleton in charge of the arrangements section.

AEONIUM UNDULATUM

by Reid Moran

Aeonium undulatum is a succulent plant with the habit of a miniature palm: an unbranched stem, about three feet high, crowned with a rosette of spreading leaves. At maturity, the center of the rosette grows quickly upward to a large cone of bright yellow flowers, which are at their best for about three weeks. The old plant dies after flowering but is replaced by offsets coming up around the base. This plant is native on the island of Gran Canaria, about 100 miles off the northwest coast of Africa, in the Canary Islands. There it grows on cliffs and sometimes on housetops at 1200 to 6000 feet elevation.

This handsome plant grows readily in southern California gardens. Planted in partial shade and watered moderately, it will establish itself and grow luxuriantly with little or no care. (If I can grow it, anyone can!) Less planted here than some of its smaller and less spectacular brethren, it certainly deserves wider use.

Aeonium belongs to the Stonecrop Family (Crassulaceae), a family including such well-known succulents as the Sedums, Cotyledons, Kalanchoes, Crassulas, and Echeverias. All members of this family have flowers of remarkable symmetry, with an equal number of sepals, petals and pistils, and either as many or twice as many stamens. The number of petals, (etc.) commonly is five and sometimes is four; but in the Sempervivum subfamily, to which *Aeonium* belongs, it is larger, commonly 6 to 15 and sometimes more than 30. To this subfamily belong the houseleeks (*Sempervivum*), with some 35 kinds native in the mountains of Europe, Asia Minor, and northwestern Africa; these plants, well-known to rock gardens of more northern climates, have mostly clustered small leaf rosettes, hugging the ground. The other members of this subfamily, often larger and more shrubby, are remarkably developed in the Canary Islands, where some 59 kinds occur, with a few outlying kinds in nearby islands and in mainland Africa.

The Canaries are an irregular east-west chain of seven volcanic islands, extending about from 60 to 270 miles off the African coast at a latitude only slightly south of ours. They range from 2000 to 12,000 feet in height, with desertic conditions near sea level, especially on the eastern islands, more temperate conditions at middle elevations, and subalpine conditions on the highest peaks. Since the Canaries have a Mediterranean climate much like ours for equal (or slightly lower) altitudes, many Canarian plants do well in our gardens; familiar examples are the Canary Island Pine, the Canary Island Palm, and the Dragon Tree. The Aeoniums and their relatives occur from sea level to about 7000 feet but are most abundant at about 2000 to 3000 feet.

Of about 1350 flowering plants native to the Canary Islands, some 440 are found nowhere else, and about 250 of these occur only on one island each. Furthermore, any one plant is likely to be confined to one altitudinal zone and may occur only in part of that zone. But among Canarian plants, *Aeonium* and its relatives provide the most remarkable example of endemism, or restricted natural occurrence. Of some 59 kinds occurring in the Canaries, only one has been found elsewhere and that on the nearby Salvage Islands; and the ten others not found in the Canaries are mostly on neighboring islands. Of these 59 kinds, apparently 40 are known from only one island each, ten from two islands each, four from three islands

Fig. 2. Rosettes of well watered plants

Fig. 3. Offsets at base of old stem, branching off underground.

Fig. 4. Flat center of rosette in dry season.

each, two from four and two from five islands each, one from six islands, and none from all seven; they have about the same percentage distribution among the islands as the endemic Canarian plants as a whole. Again, on the individual islands, the distribution of each kind is more or less restricted and often quite local. *Aeonium* itself includes 39 kinds, of which 33 are confined to the Canary Islands, two to Madeira, and two to the Cape Verde Islands; the other two are African, one in Morocco and one in Abyssinia.

Aeonium undulatum in our gardens is commonly about 2 to 3 feet high, or 3 to 5 feet when in flower: but at home in the Canaries it may sometimes reach 10 feet. The stem, about 1 to 2 inches thick, is unbranched above ground but sends up new stems close to the base (fig. 3); this mode of branching immediately distinguishes this plant from all its relatives. The terminal rosette of more than 100 leaves is often rather flat towards the center, especially in the dry season, the leaves shingled in a perfect spiral (fig. 4). The shiny dark green leaves are about 6 to 12 inches long and 2 to 3 inches wide, smooth except for fine saw teeth on the margins. Sometimes the leaves are undulate, as the name suggests, but often they are not. Plants take several years to mature, but once the floral stem starts to develop it grows rapidly (figs. 5, 6). In the space of about 6 weeks, the flattish center of the rosette pokes out and becomes a leafy stalk 2 or 3 feet long, with a showy dense flower cluster 1 to 2 feet high and wide (fig. 7). The bright yellow flowers, about ¾ inch wide, are 9- to 12-parted. The individual flower is open for nearly two weeks, and the total flowering period is about 5 weeks.

In southern California some other Aeoniums are grown commonly and others occasionally. Probably best known here is *Aeonium arboreum,* which resembles *A. undulatum* in its leaf rosettes and its clusters of yellow flowers but is smaller and bushy, with branching stems. The leaves are bright yellowish green in one form and purplish black in another. Known from the time of Dioscorides, it is widespread on the shores of the Mediterranean, cultivated or half wild. Until 40 years ago, its native home was uncertain; but then it was found, apparently native, in wild areas on the coast of Morocco.

Also commonly grown here is *Aeonium haworthii,* which makes a dome-like bush, a foot or two wide, of crowded rosettes. The leaves are thick and gray-green, often with red edges, and the flowers pale yellow, almost white. This is native rather locally on the north coast of Tenerife, the largest of the Canary Islands. A similar plant from the island of Gomera, often grown here, is *Aeonium decorum,* which differs in its pink flowers and its narrower leaves, which are bright green or, on exposure, often red.

Several other Aeoniums are seen in succulent collections and less commonly in general cultivation. Most remarkable is *Aeonium tabulaeforme,* whose rosettes 6 inches to a foot across, are flat as the proverbial pancake. On the northern coast of Tenerife, it commonly grows plastered on vertical cliffs, in some places quite abundant. For almost 300 years it has been grown as a sort of minor plant wonder. Also noteworthy is *Aeonium nobile,* with solitary short-stemmed rosettes about 2 feet wide of rather heavy leaves and a flat flower cluster to 2 feet wide and with as many as 50,000 flowers. The flowers are unique among Aeoniums in having red petals, though the yellow anthers modify the general effect in the direction of orange.

The classification of plants of the *Sempervivum* group was for many years unsatisfactory and their identification difficult, owing in part to their rather free hybridization in nature and especially in gardens. In 1921 R. Lloyd Praeger, a Dublin librarian and keen amateur botanist, published a study of the cultivated members of the related genus *Sedum;* and soon after, he was invited by the Royal Horticultural Society of London to prepare an illustrated account of the Sempervivums. Trying at first to work with the plants available in cultivation, he soon found that a large proportion of these were hybrids of undeterminable origin. He therefore traveled to the native areas, studied the wild plants, and brought back wild plants for garden study at home. Besides collecting in the mountains of Europe, he made two long trips to the Canary Islands, visiting every island and discovering several kinds overlooked before. His careful study solved many of the tangled problems of classification and nomenclature. Although a few more kinds have since been found and named, Dr. Praeger's book, published in 1932, remains the best source of information on this attractive group of plants.

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Fig. 5. Center of same rosette, starting to grow out into a floral stem.

Fig. 6. Same rosette as in Fig. 5, ten days later.

Fig. 7. Dense flower cluster.

HARMFUL PLANTS

by Lovisa C. Wagoner

Euphorbia splendens — Crown of thorns.

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Many gardeners take a kind of pride in their habit of nibbling the leaves or petals of unfamiliar plants in order to identify, forgetting the chance of ending an experimenting career.

Harmful plants are both indigenous and naturalized, are grown commercially, in gardens both public and private, and as houseplants. The harmful effect of dangerous plants varies, causing mild to severe vomiting, diarrhea; they are stimulating or depressing; deadly poisonous; or at the mildest extreme, irritating to the skin. Some plants are so poisonous that the least contact is harmful; others harm only when chewed, and still others, when swallowed; some cause mechanical injury.

"Certain families of plants are characterized by distinct poisonous properties, according to Souder.(1) "The Aroid, the Spurge, the Agave, the Nettle, the Umbellifera, the Strychnine, the Dogbane, the Milkweed, and the Solanum families all have poisonous properties. Poisonous plants differ in degree of harmfulness. Properties are sometimes affected by local conditions of soil, climate and cultivation. They may vary according to season. Certain plants may be highly poisonous, while others are harmless. Any plant which contains a milky juice should be treated with caution, until more is known about it."

Because a member of a dangerous family may be innocuous, it is all the more needful to look carefully into these matters; for example, while *Croton tiglium,* native to the East Indies, yields a powerful purgative oil, other Crotons, highly colored ones, belonging to the genus *Codiaeum,* (sometimes planted to attract quail) such as *Croton glandulosa* and *Croton capitate* are not poisonous. It may very well be that the amateur should avoid every member of a family containing a poisonous variety. On the other hand, if this were applied to the family *Euphorbiaceae,* to which Crotons belong, many delightful plants would be ruled out. Another member, poinsettia, has become part of our Christmas celebration in spite of the fact that its leaves are as dangerous as those of the oleander; a single leaf of either can be a deadly dose for a child.(2) (p. 5) Always the necessity of selection in terms of possible harm must be kept in mind, for whenever little children may be endangered, the pleasure of adults is certainly of secondary importance.

There are many genera within the family *Solanaceae;* for example, *Solanum* and *Lycopersicon.* To the former belong the nightshades, the potato, the Jerusalem cherry, and bitter-sweet; to the latter belongs the tomato, (that excellent food once known as love apple and thought to be poisonous).

Several plants are called 'deadly nightshade'; two belonging to the family *Solanum* must be especially noted; the very dangerous one is Belladonna, (*Atropa Belladonna*) which is the source of important drugs and the other, although less dangerous, is less poisonous, *Solanum nigrum*. The confusion caused by using the same common name to refer to different plants is also illustrated by the name 'jasmine', which refers to varieties of the Jasminum family (*Oleaceae*), and also to *Gelsemium* of the family *Loganiaceae*. It is the latter, indigenous in certain Southern States, that is both deadly poisonous and especially attractive to children because its nectar is so sweet.

A few examples will show that information must be both inclusive and specific as to area in which a plant grows, the particular variety and the precise effects. One variety of a species, for example, the very large nightshade family, may be harmful, another edible, at least in part. One part of a plant may be harmful, every part of another; it may be the leaf, the stem, the root, the flower, the fruit, or all of these. Sometimes cooking will destroy the toxic properties; for example, pies are sometimes made of the berries of one form of the nightshade family (*Solanum nigrum*); eaten raw the berries, especially when green, are poisonous. Boiling destroys the harmful quality of the red elderberry so that in some areas jelly, reported to be delicious, is made from them. The fact that birds or animals may safely eat cannot be taken as indication as fitness for human consumption. The mourning doves devour the red elderberries (*Sambucus callicarpa*), avidly stripping the bushes almost as soon as color begins to show. Other birds eat the berries of poke weed (*Phytolacca americana*) safely but they do not masticate the seeds. Another important thing to notice in each case is that potency is greater at certain seasons, that is, when the plant or fruit is at a certain stage of development.

Parts of some plants are commonly used for food while other parts are poisonous; for example, the sprouts and leaves of the so called Irish potato are poisonous, although the tuber itself is the best of food except when it has been exposed to the sun. Such poisonous sunburned portions are easily distinguished because of their green color. The raw green fruit and the leaf of the tomato (*Lycopersicon esculentum*) are poisonous as is the leaf blade of rhubarb (*Rheum Rhaponticum*). Kingsbury[2] (op. cit. p. 11-12) says "of all the plants in the vegetable garden, rhubarb . . . is the most dangerous because persons occasionally use the leaf blade for food." Even when cooked it may cause dermatitis.

Distribution

The Snowberry (*Symphoricarpus albus*) is an example of an indigenous plant found pretty much over the United States. Sweet[5] says the leaves are poisonous if eaten but tradition holds the berries also to be poisonous. These are an important wild life food because they hang on the bush most of the year. Gunther [6], speaking of the widespread use of these berries by Indian tribes of Western Washington, says, "The berries are always steamed on rocks."

Death camas and the beach pea will serve as examples of poisonous plants indigenous in the Northwest. The beach pea (*Lathyrus maritimus*) is widespread, growing on sandy beaches along fresh and salt water. Not long ago a child who had eaten the green peas became violently ill but fortunately could be rushed to the hospital in time. Haskins [7] says that these green peas are used like garden peas. It may be that cooking destroys the poisonous property.

The name Camas refers both to that widespread food plant so important in the diet of western Indians and recommended in lists of edible foods to be found in wilderness areas, Camasia or Quamasia (quamash). The other camas, Death Camas (*Zigadenus venosus*) is dreaded because it is poisonous to man and to beast even though the honey is reported to be both delicious and harmless. Members of the Lewis and Clark expedition suffered severely from eating this bulb. The two plants grow in identical situations but may be distinguished by the depth at which they grow. Unfortunately, the poisonous bulb grows near the surface, the edible, more deeply. The two forms of camas planted in gardens, *C. leightlinii* and *C. cusickii*, are reported to be non-poisonous. (Haskins[7] op. cit. pp. 29-35.)

Another example of a naturalized plant but one more limited in its area is the Scotch broom (*Cytisus scoparius*, sometimes listed as *Genista scoparia*). It is sometimes hard to realize that this shrub was at one time introduced into this area since now it grows so abundantly. Its poisonous seeds make it all the more unwelcome.

Along the Atlantic Coast and in the midwest Pokeweed or Pokeberry (*Phytolacca americana*) is common in open places. It is a violent but slow acting emetic; the root is the most poisonous, the seeds less so. The young shoots have been used as pot herbs, but they must be prepared and cooked with great care so that every bit of the root is removed.

Plants Indigenous and Cultivated

Some species still found in their native areas are also cultivated. In some cases the cultivated form differs from the native. All forms of yew (*Taxus*) English, Japanese, both forms native to America, the Northwestern and Western, are poisonous in all their parts. The seed, because of its bright red aril is particularly dangerous.

In the eastern and northeastern states the European bittersweet (*Solanum dulcamarum*) is now naturalized; in the northwest it is cultivated in gardens. Its leaves and berries, much prized for dried arrangements, if eaten in quantity may cause poisoning. As a matter of fact, two different plants are called bittersweet: the one just mentioned which is native in Asia as well as in Europe as *Celastrus scandens*, native in the eastern part of the United States, but introduced in other parts. This is also called false or shrubby bittersweet and also waxwork.

All forms of larkspur and delphinium, especially the seeds, every part of rhododendrons, and all *Ranunculaceae*, for example, *Aconitum* in its many forms not only *A. officinalis* contain violent poisons. Monkshood, of course, has long been a prized garden plant.

Harmful Cultivated Plants

One of the most dangerous cultivated plants is February daphne, (*Daphne Mezereum*), so much enjoyed for its early, abundant, and fragrant bloom and for its brilliant red berries. These, quite literally, have a

***Acokanthera spectabilis*—Bushman's Poison Branch showing fruit, old flowers and new buds. *Ed.**

Ricinus communis—Castor bean. A purple-leaf form much favored in this area. Seed is enlarged. *Ed.

fatal attraction for children; they do resemble edible berries like red currants and red huckleberries and grow at just the right height for picking. Children eat even the equally poisonous black berries of the *Daphne laureola.*

Tulips, narcissus, snowdrops, colchicum, lily of the valley are examples drawn from the long list of harmful plants often found in gardens. In this large group are to be found all types, even the deadly poisonous.

Deadly Poisonous Plants

Plants growing wild that have adapted themselves to a different habitat often are assumed to be indigenous. When a child has been poisoned it probably makes no difference what the origin of the plant may be. On the other hand, anyone interested in the plants themselves finds this aspect worth noticing. One of the most dangerous examples is the poison (or deadly) hemlock, sometimes called poison parsley (*Conium maculatum*). No doubt it is all to the good that the almost instantaneous association with the words poison hemlock is 'Socrates' (who died by drinking a cup of this poison) for this plant is so extremely dangerous. Although native to Europe and Asia it now grows freely and rankly in various parts of North America, along the wayside and in untended places, even within city limits where it is sometimes known as winter fern. All parts of the plant contain the active principle and because it is so valuable medicinally thousands of pounds of leaves and seed are imported each year for the drug trade. (Sweet. (5) op. cit. p. 48). Flowers and seed heads are attractive, resembling Queen Anne's lace, (*Daucus carota*), so much prized by flower arrangers. This plant too has its own unfortunate property, for some individuals are sensitive to it.

A near relative, water hemlock or cow bane is acutely poisonous. Both young shoots and roots contain the poison. The form native to the eastern part of the United States is *Cicuta maculata.* Kingsbury[2] says of this "because children are attracted to the fleshy roots and find them not unpleasant in taste, this plant should be eradicated in areas where children may find it." The form growing in the Northwest, *Cicuta douglasii,* provided an ingredient for the arrow poison used by the Klamath Indians. (See Haskins[7].

Jimsonweed, thorn apple (*Datura stramonium*) grows both in waste places and back yards and also is cultivated in gardens. This plant is held responsible for more poisonings than any other; all parts are poisonous, the seed and leaves in particular.

Also found in neglected places is the poisonous ornamental vine called matrimony (*Lycium halimifolium* or *vulgare*). Both flowers and its bright red fruits are attractive. This was introduced from Eurasia but it now is widespread, having escaped from gardens. Muenscher[3] (op. cit. p. 13) says, "The fruits should never be eaten by humans or animals."

Deadly nightshade, Kingsbury[2] (op. cit. p. 26) says makes a poor common name because it refers to several different plants. The most poisonous is *Atropa Belladonna,* important economically as the source of drugs. Another, *Solanum nigrum* in some areas has been pretty well rooted out since the poisonous nature of the raw berries, especially when green, has been widely recognized. Yet the attractive plants are still to be found growing in waste places. Bailey, in **Hortus Second,** calls it "cosmopolitan."

Leaves and roots of the several forms of false hellebore (Veratrum), native in the United States, are poisonous. Their alkaloids are used medicinally to lower blood pressure. They grow in damp, acid soil and are so handsome that they are cultivated both in the border and in the wild garden. The species *viride,* also known as American white hellebore, native to eastern North America, is sometimes called Indian Poke. It is to be distinguished from pokeweed (*Phytolacca americana*), also deadly poisonous and also used medicinally. Bailey in **Hortus Second** lists two species growing in Washington, *californicum,* and *speciosum.*

Plants Causing Nausea, Vomiting, and Diarrhea

Often classed as poisonous along with the deadly are those that cause gastric effects of varying degrees of severity. Among these are many of the spring bulbs. While the gastric disturbance may be temporary, it may, if quantities are eaten, be severe enough to cause acute or even fatal results. Perhaps it is for this reason that lists of harmful plants seldom distinguish degrees of poisoning, other than to use the adjective fatal or deadly when appropriate.

Plants Causing Dermatitis

Muenscher[3] lists 99 plants that cause dermatitis, but of course makes no claim that this list includes every irritating plant. While these plants cause less concern than the poisonous they are troublesome enough. Effect and degree of irritation are peculiar to the individual; one person may be critically sensitive to a particular plant but not at all sensitive to another. Those who regard themselves as immune may find that this is more apparent than real, depending upon amount and duration of contact. Just as individuals differ in the intensity of their reaction to poison ivy (*Rhus Toxicodendron*), found in the eastern part of the United States or poison oak (*Rhus diversiloba*) native to the Pacific Coast, or to poison sumac (*Rhus vernix*) or to *Primula obconica,* so they differ in reaction to many plants. On the other hand, the degree of tolerance cannot be measured and therefore no risks should be taken. In this area the Northwest nettle (*Urtica Lyallii*) is a familiar menace.

Plants That Cause Mechanical Injury

Plants with spines, thorns, stiff hairs and those containing sharp crystals inflict mechanical injury. This group is perhaps of more importance in relation to children but adults must also be careful. The spines of cactus are too familiar to need more than mention. The sharp awns or bristles of barley for example and of fox grass can cause as much harm to human beings as to cats and dogs. Many of our prized shrubs are thorny, for example, hawthorne (*Crataegus*) in its many forms, both native and introduced from other parts of the world; the low growing naturally are more dangerous where children are concerned.

The calcium oxylate crystals in all forms of *Dieffenbachia* or dumb cane, if chewed, will injure the mucous membranes of mouth, tongue, and lips

interfering with eating, swallowing, and speaking. Hence the common name dumb cane. If swallowed these crystals are poisonous. (See Kingsbury[2] pp. 5-6.)

Plants Grown Indoors

An old-fashioned plant that continues to be grown indoors is the Crown of Thorns (*Euphorbia splendens*) which, as the name indicates, has thorns along the stem and these are so long as to be really spikes. The long tabulation given in the *Max Schling Book of Indoor Gardening*[8] mentions a single plant as dangerous, the Oleander, remarking that a 'nibbling child or pet' may be poisoned, yet many more fall into Souder's[1] categories. This author lists many other poisonous plants belonging to different families. Among these are the well-known yellow leaf mother-in-law's tongue (*Sansevieria trifasciata* var. *Laurentii*), elephant ear (*Alocasia macrorhiza*) and, dumb cane (*Dieffenbachia picta*).

Although it has been said that the Dieffenbachias are the only harmful house plants, reports of poisoning include a number of others, for example, several of the tropical plants commonly called elephant ear, Jerusalem or Natal cherry (*Solanum pseudocapsicum*). The latter, while native to the old world, is commonly used in this country as Christmas decoration. While some authorities state that the berries when fully ripe may be eaten, Muenscher[3] (op. cit. p. 208) says that the fruits contain toxic substances that may cause severe poisoning.

(Editor's note: The conclusion of the article on the subject of Edible Wild Plants *will be published in the next issue.)*

Note: Lists and pictures of dangerous plants are available for different parts of the country. Because of the great variety of climatic conditions, as is easily understandable, local lists are essential. Response to requests for help are so prompt and generous that the reader is urged to secure the appropriate lists, to have them at hand, to familiarize himself with the introduced and cultivated as well as with the wild and indigenous. Obviously, these adjectives are not mutually exclusive.

Some of the sources, which of course vary from state to state, are:

Departments of Pharmoscognacy in Colleges of Pharmacy
Wildflower Preservation Societies
The National Safety Council
The State Departments of Safety Education
Agricultural Extension Agents
Poison Control Centers

None of the lists, however, claims to be complete. All berries are to be suspect until their innocence has been established.

The publication of the New England Wildflower Preservation Society are particularly noteworthy and one wishes that the same carefully prepared illustrated lists were available for each section of the country.

An authoritative list, that makes no claim to being inclusive, "Common Poisonous Plants" is included in Anon. *Poison in the Backyard,* Family Safety, A National Safety Council Publication, Summer 1964. p. 5.

Obviously, the lists published in popular journals cannot be accepted as authoritative but must be checked carefully since the need for inclusive, reliable lists is not yet completely met.

Thevetia thevetioides

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End of Dr. Wagner's article

Editor's note:

"Poisonous Plants in the Garden" is by John M. Tucker who is Professor of Botany at the Davis campus of the University of California, and M. H. Kimball who is Retired Agricultural Extension Service Ornamental Horticulturist. Their publication is presented with Dr. Wagner's list because of its attention to plants more common to California. Plants mentioned by them that were mentioned in Dr. Wagner's treatise, were omitted from this listing in order to prevent duplication.

It is interesting to note that only one title is common to the two bibliographies.

Gardeners, nature lovers, campers, fishermen should find this 13 page pamphlet useful enough to keep it at hand where it can be readily referred to. It may be obtained free by writing to:

Agricultural Extension Service
University of California
5555 Overland Dr., Bldg. 4
San Diego, Calif. 92123

Due to tabular form and lack of space, the bibliography for *Poisonous Plants in the Garden,* by John M. Tucker and M. H. Kimball, has been placed preceding the list. Small figures following the name in the list, refer to the numbered titles in this bibliography.

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*** Contains very poisonous substances.**
D — Plant causes dermatitis.

POISONOUS PLANTS IN THE GARDEN

by John M. Tucker and M. H. Kimball

Scientific Name and Reference Number	Common Name	Poisonous Part of the Plant
* *Acokanthera* spp. [6]	Bushman's poison	All parts
Adonis aestivalis [4]	Summer adonis	Leaves and stem
Aesculus spp. [4]	Horsechestnut, Buckeye	Leaves and fruit
Ailanthus altissima [4]	Tree of Heaven	Leaves, flowers — D
Amaryllis belladonna [4]	Belladonna lily	Bulbs
Anemone patens [4]	Pasque flower	Young plants, flowers
Asclepias spp. [4]	Milkweeds	Leaves, stems
Asparagus officinalis [4]	Asparagus	Young stems — D
Baileya multiradiata [4]	Desert marigold	Whole plant
Brunsvigia rosea [4]	Garden amaryllis, Naked lady	Bulbs
Buxus sempervirens [4]	Common box	Leaves — D
Calonyction spp. [6]	Moonflower	Seeds
Cephalanthus occidentalis [4]	Buttonbush	Leaves
Cestrum spp. [1]	Cestrum, Night-blooming jessamine	Leafy shoots
Clematis vitalba [1]	Traveller's joy	Leaves
* *Colchicum autumnale* [4]	Autumn crocus, Meadow saffron	Leaves
* *Convallaria majalis* [4]	Lily-of-the-valley	Leaves, flowers
Corynocarpus laevigata [6]	Karaka nut	Seeds
Crinum asiaticum [4]	Crinum lily	Bulbs
Crotalaria spp. [6]	Canary bird bush	Seeds
Cypripedium spp. [4]	Lady slipper orchid	Hairy stems and leaves — D
Cytisus laburnum (see *Laburnum*)		
* *Delphinium* spp. [4]	Larkspur, Delphinium	Young plants, seeds
Dicentra spp. [4]	Dutchman's breeches, Bleeding heart	Leaves, tubers
* *Digitalis purpurea* [4]	Foxglove	Leaves
Duranta repens [3]	Golden dewdrop	Fruits, leaves
Echium vulgare [4]	Blue weed	Leaves, stems — D
Euonymus europaea [4]	European burning bush	Leaves, fruit
Eupatorium rugosum [4]	White snakeroot	Leaves, stems
Euphorbia spp. [4]	Euphorbias, Poinsettia, Snow-on-the-mountain	Milky sap — D
Ficus spp. [6]	Figs	Milky sap — D
Fragaria spp. [6]	Strawberry	Fruit — D
Ginkgo biloba [4]	Ginkgo, Maidenhair tree	Fruit juice — D
Gloriosa spp. [5]	Climbing lily	All parts
Hedera helix [4]	English ivy	Leaves, berries
Helenium spp. [4]	Sneezeweed	Whole plant
Helleborus niger [4]	Christmas rose	Rootstocks and leaves — D
Heteromeles arbutifolia[4]	Toyon, Christmas berry	Leaves
Hydrangea macrophylla [5]	Hydrangea	Leaves
Hymenocallis americana [4]	Spider-lily	Bulbs
Hypericum perforatum [4]	St. Johnswort	All parts, when eaten — D
Ilex aquifolium [4]	English holly	Berries
Impatiens spp. [2]	Impatiens	Young stems and leaves
Iris spp. [2 4]	Iris	Rhizomes — D
Juglans spp. [6]	Walnut	Green hull juice — D
Kalmia latifolia [4]	Mountain laurel	Leaves
* *Laburnum vulgare* [1]	Golden chain	Leaves, seeds
Lantana spp. [4]	Lantana	Foliage
Ligustrum spp. [2 4]	Privet	Leaves, berries
Linum usitatissimum [4]	Flax	Whole plant, especially immature seed pods
Lobelia spp. [4]	Lobelia	Leaves, stem fruit — D
Lupinus spp. [4]	Lupines	Leaves, pods, especially seeds
Macadamia ternifolia [3]	Queensland nut	Young leaves
Maclura pomifera [4]	Osage orange	Milky sap — D
Melia azedarach [4]	Chinaberry	Fruit, flowers, bark
* *Myoporum laetum* [1]	Ngaio	Leaves
* *Narcissus* spp. [4]	Narcissus, Daffodil	Bulbs
Nepeta hederacea [4]	Ground-ivy	Leaves, stems
Nerium	Oleander	All parts
Nicotiana spp. [4]	Tobaccos	Foliage
Ornithogalum umbellatum [4]	Star-of-Bethlehem	All parts
Oxalis cernua [3]	Bermuda-buttercup	Leaves
* *Papaver somniferum* [4]	Opium poppy	Unripe seed pod
Pastinaca sativa [4]	Parsnip	Hairs on leaves and stems — D
Phacelia	Phacelia minor	Leaves, stems — D
Philodendron spp. [6]	Philodendron	Stems, leaves
Phoradendron spp.	Mistletoe	Berries
Prunus spp. [2 4]	Cherries, Peaches, Plums	Seeds, leaves
Rhamnus spp. [2]	Coffee berry, Buckthorn	Sap and fruit — D
Rhododendron spp. [4]	Rhododendron, Azalea	Leaves
Ricinis communis	Castor bean	Seeds (no antidote)
Robinia pseudo-acacia [2 4]	Black locust	Young shoots, bark, seeds
Rumex acetosa [4]	Sour dock	Leaves
Saponaria vaccaria [4]	Cow cockle	Seeds
Senecio mikanioides [1]	German-ivy	Leaves, stems
Solanum nodiflorum	Black nightshade	Green berries
Solanum tuberosum [4]	Irish potato	Green skin on tubers
Tanacetum vulgare [4]	Common tansy	Leaves
Thevetia peruviana [5]	Yellow oleander	All parts
Veronica virginica [4]	Culvers root	Roots
Zephyranthes spp. [4]	Zephyr-lily	Leaves, bulbs

FRIENDSHIP TIES WITH OUR SISTER CITY

by Bruce Asakawa

Planning problems in landscaping the Japanese Garden at the County Administration Building.

SAN DIEGO, during the past several years has been strengthening its ties with many of the Far Eastern countries. Regular freight lines of ocean going cargo ships have directly linked us with countries such as the Philippines, Formosa (Taiwan) and Japan. Not long ago, our city fathers, with the consent of the residents of San Diego, extended and accepted Hands of Friendship with the city of Yokohama, Japan. Now Yokohama is our gracious Sister City. The city of Yokohama, like that of San Diego is a port with a healthy amount of sea-going traffic and cargo passing through its ports. All of the unique Japanese traditions and historic ideas are evident in Yokohama. Especially evident there is the natural and varied forms of Japanese landscaping.

We have shared with our Sister City an exact duplicate of the statue which guards and protects our harbor. This San Diego statue stands on the grounds of the old Civic Center Building, now the County Administration building. It stands between the massive Spanish-style architecture of the main building and the shore line of San Diego's harbor. Early this year, there was a movement to change the landscaping immediately around the statue to a strictly Japanese flavor to honor our sister port. The San Diego chapter of the California Association of Nurserymen, was asked by Mr. James Saraceno, President of the Civic Center Garden Club, to develop a plan along these lines. I was then approached by the Association to serve as a landscape consultant in conjunction with the development of the plan. We felt that it was both fitting and ideal to once again express our friendly relations with our Sister City by dedicating this as a tribute to a friend.

The problems which were encountered in the development of the plan, were few in number but grandiose in their size especially with respect to the area with which we were working. You may wonder how we could possibly have any problems when the theme was dictated, the area was regulated, the plant material was practically totally scheduled. The only thing left to do was to draw up the plan.

The first major problem we encountered was scale and size relationships of the existing and immediate environment of the area. The relative closeness of the large statue, the extensive areas of paving, the enormous size of the main building, — all dominated the area with which we were trying to plan. Together with this problem there was the fact that all of the existing conditions were keyed to a Spanish Colonial theme, not at all Oriental. We overcame this problem by accepting the facts and integrating the design to complement the existing conditions, yet interjecting at every opportunity, our own theme.

I would like to explain, at this point, that I feel that it is a very poor procedure to uplift an area or structure from a perfect environment, which might have taken hundreds of years to develop, and then plop it down in another location. I feel that this transposition of native cultures is a sham and an affront to their integrity. I do feel however that it is to everyone's advantage to draw upon ideas, techniques and theories and apply them to a special situation. This, one might consider an eclectic approach, and lacking in originality, but it is my opinion that we, as individuals, cannot hope to experience totally in our lifetime what has taken many lifetimes to achieve. Nor do I feel it possible for anyone, myself included without exposure to and combining of ideas good and bad, to reach for new and classic theories which are plausible and practical.

With this preceding explanation, I hope that it will be easier for you to understand why we did not take a specific garden in Yokohama and transpose it to the site we were concerned with. What we did, however, was to combine the ideas and the uniqueness behind a Japanese garden with the existing conditions.

The second problem we had was with the plant material. How should we use the basic and existing mature plant material to its best advantage. All of the plants growing in the area were mature, and much of it was overgrown. We decided to remove all of the plants (Xylosma *senticosa,* Carissa *grandiflora,* and Abelia *grandifloria*) except two very large and beautiful clumps of Phoenix *reclinata* on either extreme of the development. These palm groupings would serve as an ideal termination of our new planting, and serve as excellent transition material to the rest of the existing landscaping. At the time of this writing, clearing of the area has taken place, but the installation of the new material has not as yet started. By using an elevated terrain, we will be able to utilize the greater height in elevation of the finished grade to bring the scale of our development into line with the rest of the immediate environment. We will accentuate the 'mounding' effect with large boulders. This igneous material, combined with the 'mounding' effect, will lend itself very nicely for the development of a dry stream bed and dry pond effect which will dimish at either extreme, under the clumps of palms and ground cover (Hedera *algeriensis*). The rest of the landscaping is just a matter of course with a touch of finesse of plant placement and groupings.

The third and final problem we had in the development of the plan, was the fact that it was necessary for us always to keep in mind that only a minimum amount of care and maintenance could be afforded. This problem will partially be overcome by using plant materials that take little care.

The plan was presented to the San Diego County Board of Supervisors for their approval. It was unanimously accepted.

Jacaranda

for

Point Loma

by Janet Richards

The following is a report made by the chairman of the landscape committee of Point Loma Village Beautiful to a meeting of that organization held at the San Diego Yacht Club on June 8, 1965. It is printed here to demonstrate how one group selected a street tree for its own particular purpose.

ANY ONE of you, standing on the corner of Rosecrans and Cañon and scanning there the landscape, could say with real conviction, "Any tree is better than no tree at all." True, and it would remain true until you came up to the point of having to say, "Plant this!" Plant what?

Which tree shall we plant which does not just meet the requirements for a street tree, or is something to "green-up" the sidewalks? Which tree will do the most for that inner urge which expressed itself in this organization's statement of purpose: to make this village beautiful?

With this in mind, the landscape committee selected the jacaranda, and acknowledges here the reassurances of Roland Hoyt, Fellow of the American Institute of Landscape Architects.

Since we believe that as members of Point Loma Village Beautiful you are vitally interested in how we came to this, we take you once lightly through the thinking which brought us to our selection.

A typical way to proceed is to state the problem.

First,—what tree would have the proper scale in height for the width of Rosecrans which is about 100 feet? Second,—which tree has deep roots and therefore will not uproot sidewalks? Third,—which tree would keep a handsome height above the heads of pedestrians walking below? Fourth,—which tree would submit to pruning, in places where overhead wires exist, without losing its shape? Fifth,—which tree would not drip oils or saps on the cars parked at the curbs?

Sixth,—(in anticipation of buildings of more than one story of which we already have a few,) which tree would permit looking out from inside, and looking in from outside? Could the tree assist in sun control?

Seventh,—should we give some thought to the view from those homes on the lower slopes of Pt. Loma which face the bay? A solid headed tree could eventually create a green barrier between those homes and the view.

Eighth,—what tree has a good natural habit of growth, is resistant to pests and disease, and is not excessively fragile?

Ninth,—in the environment of a major boulevard in which there is an abundance of automobile fumes, and a climate which affords little rain, would an evergreen tree be more desirable than a deciduous tree?

Tenth,—is the tree on the list of the 18 trees approved by the Street Tree Department of the city of San Diego?

That is the size of the problem. To answer it to its maximum and give us something which would contribute to making Point Loma Beautiful,

We selected the jacaranda, because:

It grows to 50 feet and will be in good proportion for the width of Rosecrans; it has deep roots and will not uproot sidewalks; it grows a single trunk with branches above pedestrian height; it will submit to pruning without distress to its natural form; it is a proven grower on Point Loma, there being many fine specimens now standing. It is an "open-headed" look-through tree, permitting people on upper floors to see the street below from inside and permitting those below to see and perceive the shape of the building. It will not make a green barrier between the houses on the lower slopes of Pt. Loma and their view of the bay. It has a good natural habit of growth, is pest free and disease resistant and does not require frequent attention. Being deciduous, it will not accumulate an encrustation of wastes on its leaves since it puts out new leaves each year, further, it will reflect the season of the year so that Rosecrans will not look the same on August 1st as it does on February 1st. We think this change, the visual awareness of the difference between full foliage and the tracery of stems can become a point of enjoyment for those of us who use the street every day throughout the year. Sun control it will exercise, letting in sun in the winter, and filtering it out in the summer. It is on the city's list of approved trees.

In addition, jacaranda has color, not unlike the color of San Diego Bay on a bright day. Its blue, which shows in

May, June, or July, can ultimately afford Point Loma an "occasion" for a Jacaranda Festival.

Currently, with the plan to plant 60 trees on Rosecrans, 21 at Cabrillo School, and 15 on Shelter Island Drive, within the next few months we will have 96 new jacaranda trees in the village area.

Hoyt has described the jacaranda as a "good tree to look down upon." The hills above Rosecrans should offer a lovely view when the trees are in bloom.

Now the flowers which fall from the tree, depending upon one's point of view, are either a mess or a carpet of blue. THIS BLUE CARPET lasts for two to three weeks and will need to be rolled up off the sidewalks. The city's motorized Bissell will do the street. Most of the property owners sweep their sidewalks regularly and this will be just a little extra for a short period.

Every tree makes a certain amount of litter. Carrot Wood, also on the city's list, drops splitting fruit which are gummy. The carob drops pods, one foot long. Brisbane Box drops leaves all year. Ficus drops little figs, eucalyptus drops leaf, flower, fruit, and bark. Many trees drop a viscous sap. Birds love palms . . .

The selection of the jacaranda was no passing fancy. The foliage mass of the jacaranda has been delightfully described by Hoyt as having "a fineness and motility that lends toward a sprightliness or vivacity . . . in observation of all this the human faculties react in cheerfulness and gaiety and the flow of sunniness . . . as opposed to gravity and dejection or the submersion of fog."

I wish to acknowledge the help of the following persons each of whom found a way to contribute her own special talent to the accomplishment of the work of the landscape committee: Mmes. Gene Trepte, Robert Bowman, Lawrence Ross, Milton Hallen, G. Burch Mehlin, and Richard Huntington.

Realizing that the approach to Shelter Island is difficult for motorists to find, we have also suggested that the jacaranda be planted on Shelter Island Drive. In a few years, we anticipate that the trees would make a landscaped continuity leading from Rosecrans to Shelter Island. Property owners on Shelter Island Drive and lessees on Shelter Island are contributing funds for the planting of those trees.

We have also been in conversation with the U.S. Naval Training Station and anticipate the planting of approximately 75 *Ficus retusa* (Indian-laurel) along Harbor Drive. This will considerably improve the approach to Point Loma.

It will take a few years for the 15 gallon-size jacaranda to become the trees we visualize, but the planting has been started and with the watchful concern of this organization and the property owners and lessees on Rosecrans, we look forward to some breathtaking blooming Junes on Point Loma.

Early History of the Dragon Tree Comes To Light

The following letter was received by Mrs. Lester A. Wright, who called to the attention of Trees Unlimited the neglected dragon tree, and set in motion a series of events that led to its preservation in the landscaping of a new Richfield gas station.

Dear Mrs. Wright,

My thanks for the important part you and Trees Unlimited played in allowing our Draceana Palm to continue being a source of interest on the corner of Hawk and Fort Stockton Drive in your beautiful city.

I was born in Massachusetts, but the lure of palms took me to Miami, Florida. Six months in that awful climate was enough but I still wanted the breath-taking beauty of the palms. In San Diego, I found a very beautiful city. Except for size it is in a class with Rio de Janeiro. My first husband, Fred Bradley purchased the corner from Mrs. Shepard in the fall of 1921, when the Draceana was planted.

Our thanks to Cliff Smith for the interesting and informative article he wrote in the *San Diego Union* on February 20, 1965 about the Draceana Palm, to George La Pointe, John Sage and the CALIFORNIA GARDEN.

Laura Bradley Morgan
Bakersfield, Calif.

Celebrate with color

a five year planting program for California's 200th birthday, July 1, 1969

AS Governor Brown's proclamation says, "California's greatest resources are its people and its land." What could be more colorful, more lasting, more productive publicity than to transform all of Southern California into a paradise of living color with flowering trees, shrubs, vines and fields of flowers. This is the five year planting plan for each Southern California community. It is under full steam already in Los Angeles, — and San Diego like other communities in the southland is organizing to spread its share, under the Citizens Coordinate, Trees Unlimited, the Chamber of Commerce, City Beautiful and of course the Floral Association and many other groups.

You'll be hearing much of color in our immediate environment during the next four years. But don't just listen. Spread the word! Then after you have talked, get together with your neighbors, and with a plan, spread color all about you. Get into the swing with all the communities to *Celebrate with Color.* The blueprint is made already for all of us, —

1964 Year of the Plan. Community census of existing conditions and plans for needed changes to eliminate eyesores.

1965 Year of the Tree. Color in the air. A tree takes longer to grow.

1966 Year of the Shrub. Color in the background. Add it to your grounds.

1967 Year of the vine. Color on walls and fences. Screen your community eyesores.

1968 Year of the ground cover and wildflowers. Put color back where it used to be.

Five years to create a birthday present for our state worthy of its heritage of beauty!

Our California began in San Diego, when Gaspar de Portola's weary band of Spanish soldiers and Father Junipero Serra trudged into what is now San Diego on July 1, 1769. The Spanish Conquistadores found color here and called our land La Tierra del Fuego (Land of Fire) because of hilltops and slopes ablaze with poppies, with blue tangles of lupines and ceanothus. Nature had blessed our land with lavish beauty. Now much of Nature's beauty is gone. Poppies have yielded to the plow, wild lilac to the sub-division. Rivers, taxed beyond their strength, have become concrete channels, or have disappeared entirely. Man is everywhere and his tracks are on the land in drabness. To celebrate our state's two hundredth birthday, let us make it again sing with living color. There is much to be done and all that is left of the five years time to bring it into being.

There is work for all, and a job for each of us. Begin by teams going out into every street and byway and cranny, examining and noting the good and the bad and the neglected in your own surroundings. You'll see your own neighborhood in a new light. You'll no longer overlook the accustomed eyesores but examine the reason for what you find. When you begin to ask "Why is this here? Why hasn't something been done about it?" You'll get a shamefaced answer "Because no one thought to change it." Or, "We didn't get together to see that it was done. We were too busy to look at our surroundings and we were taking them for granted." Then take pictures of what you find, before and after, since Scrapbooks received from each community are judged and awards are given at the annual "Hear and tell" progress luncheons held in Los Angeles each July 1, which honors the birthday of Father Serra. Take a plant census of community color to give a factual starting point from which to establish a specified plan. Collect specimen scripts of radio and TV news releases, where and by whom; and dated news releases from daily and local community newspapers.

Already there are good tools available to us for our use. One is "Flowering Trees for Year Round Color" published by Los Angeles Beautiful and the California Arboretum Foundation and the Southern California Horticultural Institute under the direction of Dr. Samuel Ayres, Jr. He set the ball rolling in our area with his talk at the Floral Association meeting on April 20 of this year. His subject; — "Flowering Trees and Shrubs for Southern California" and his book was sold here at this time. The Nursery Growers Association of California and Jim Perry have published a new tree list telling where trees are to be found and purchased in different sizes and quantities.

There is also a good bibliography "Community Five Year Planting Program Celebrate with Color Plant Guide," which gives the printed resources to increase our knowledge of new plant materials. There is the account of the Orinda, California plan with its three goals already attained, as well as what is being accomplished in other communities. This issue of CALIFORNIA GARDEN on page 18 tells what has been done with a plan and enthusiasm and hard work by the Landscape Committee of Point Loma Village Beautiful in planting jacaranda trees along their highway. Their enthusiasm has set the ball rolling and their influence is widening into adjoining communities like the ever-widening circle of waves caused by the impact of a forceful object thrown into a quiet pool.

This is a good beginning, — but just a beginning! Visualize this and like activities by thousands — communities, groups, individuals, like the humming of the hive where each bee performs his special task in the master plan in order to reap the honey.

Strictly from a dollars and sense viewpoint, landscaped homes, and eyesores eliminated, increases property values and means a better life for everyone. Landscaping industrial plants is good business and good public relations as it reflects the owner's pride in his product and his thoughtfulness towards the public. It makes for more gracious living for all. Roadside plantings can take away traffic glare, keep highways cleaner for safety and beauty.

Plant California today for a more beautiful tomorrow.

ROLAND HOYT* RECOMMENDS

DABOETIA

DABOETIA CANTABRICA, the Irish Bellheather, may be used here in negative approach to heather, most of the heaths and the tiny Bruckenthalia, a kind of heath in miniature which is adapted to a sandy spot in the rock gardens of warm-temperate areas. This is to point up the impracticability of trying to grow these plants in sub-tropical regions and to suggest alternatives. So often the new gardener in Southern California and sometimes those who know better, will be led by an overweening desire, an unquenchable nostalgia or the sight and possession of a beautiful blooming heath from the florist . . . sometimes in a can in the nursery . . . he must perforce and almost involuntarily try it out in the garden. Always disappointment is the end, and finality. These plants do not adapt to our gardens and there seems to be no way of getting permanently around this dislike to our way of living.

In the first place, our highly fertilized ground of the garden is almost toxic to them and applied fertilizer will be a kind of poison. The continual irrigation there with water of high alkalinity is essentially against their nature and protection from wind and breeze un-natural. They are basically borderline within these regions and will be attempted only advisedly . . . fate and foredoom . . . and in the coolness and sandy soils of the coast;—elsewhere under foregone conclusion. *Erica mediterranea* and its dwarf variety will persist longest while *Erica melanthera* from South Africa is the one common exception to all this that precedes. It will give the typical and glorious flowering in midwinter and its quality of service calls for further introductions from that area for testing. There are many species available for this.

The subject plant above is another deviation, a transgressor so to speak, that overpasses and accepts our conditions after a manner. Probably a reason for this goes back to its several natural habitats which are included in that strange and little understood distribution known as the Lusitanian Flora. This is thought to have occupied a land mass that at one time connected the British Isles with continental Europe and which now exists as a great triangle, the points resting on Ireland, the Azores, Northern Spain and Southwestern France. Another plant of this flora that we know well and use frequently is *Arbutus unedo,* the strawberry tree and possibly, *Geum* which does so well in our herbaceous plantings.

Our little bellheather is erect and bushy 12-15 inches high or somewhat spreading as it succeeds in growing. It is what's known in garden parlance as elegant, symmetrical whatever form it takes, decorated June - November with swaying sprays of seemingly inflated, elongated-roundish, comparatively large hanging bells that prompts in the memory of heath. The color may be rose, dark purple and even reddish crimson, but mostly white as found here. The glistening leaves are small, elongated and sharply pointed, closely following the stems.

It likewise wants humidity in air and in the soil, but will suffer the lack for a time and recover from a considerable wilt or may be cut to the ground for recovery. The soil should be sandy for sharp off-drainage of our tainted water. It should be quite acid or made so with finely ground leaf mold . . . much of it. Other dependable amendments for quick acidity may be used, but it will scarcely be worth the effort to work over a basically limey soil. Half-shade will be desirable when tried inland, increasing with distance from the coast. The plants may be sheared to advantage when they establish. Do this some time between the flowering period and new growth. This may be in the fall or deep winter.

It will be well to think of this as having come lately from its native, misty moors where there is little trifling in the matter of site. Know that we cannot impose our wills too far in a transplantation and try to make it feel at home. Frequently, in recent years, this little plant has been available here in nurseries.

Daboecia cantabrica

* Member ALSA, author of Ornamental Plants for Subtropical Regions.

REFLECTIONS FROM A ROSECROFT LANTERN

by Virginia Robinson Perkins

IN our garden stands an Oriental sage, a reminder of past years, reflecting its massive granite beauty in a shallow pool. Imported to this country early in the twentieth century, the Japanese lantern was "at home" in the Rosecroft Begonia Gardens on Point Loma in San Diego for more than forty years. After the death of my father, Alfred D. Robinson, my husband and I moved the lantern to our home, where it has brought back happy memories.

Rosecroft Gardens was made up of many gardens in one, artistically landscaped so that the eye could see no farther than one view at a time. Each vista was private, intimate and complete in itself. As one wandered through the lath house and reached the far eastern side, a serpentine walk, called the Three W's (Winding Wall Walk) ran adjacent to the red stone wall. Where the first "zig" in the walk became a "zag," there stood the stone lantern in a raised round bed of *Begonia pearcei,* in rich shades of yellow. Its rock edge was covered with Helxine, so carefully trimmed that it looked like a mossy hedge.

To the north of this spot was an area named the "family patch" which meant just what it sounds like—an area set aside for us children. The area was psychologically fenced, just high enough to discourage us from getting out, yet low enough so we felt a part of the whole garden. The "family patch" was quite large, planted in a circle with a kind of palm (whose name escapes me), which at maturity, has about twenty feet of smooth straight trunk, and a hat of leaves on its head. This, declared my father, was to form a pergola with a roof of leaves at the top. I suppose that there were "guffaws" at his vision at the time, but today it has a roof of leaves on top and a Grecian pillar effect of twenty foot trunks as he envisioned.

Probably, the necessity of the "family patch" is obvious to all parents. After finding some of his best begonias dug up without root or tuber and planted in the middle of a path, this area was set aside and inferior plants, designed for the dump heap, were ours to plant, dig up, and replant anywhere we wished in this, our own compound.

As we became older, the family patch was no longer needed for us, and a small building was erected next to it, which became the library. A large collection of horticultural books filled its shelves. A library table, antique Bokhara rug, several straight chairs and a brown leather Morris chair furnished it. We went to the library often, not to read the books, as one might suppose, but to conquer the Morris chair. We would jump into it and then push back hard, so that it reclined and simultaneously thrust out its foot and leg rest. Then we would just sit back and daydream, feeling ten feet tall.

On Sundays during the summer months, my father gave lectures, sponsored by the Floral Association, followed by tea in the "lecture area" just inside and straight ahead of the entrance. On these occasions, we watched with awe as he dressed in an impeccable grey suit and donned his best fire opal cuff links and tie pin. The reason for the interest was that we knew him best in khaki clothes, an old hat, puttees and leather arm guards. Only in the summer, at lecture time, was the grand change made. We were not allowed in the lecture area at this time as we refused to dress up (summer being our old clothes and no-shoe time). Shoes, in those days were the curse of school semesters. To compensate for not being allowed to be part of the lecture group, we would quietly run around to the back of the lath-

S. D. FAIR FLOWER SHOW TROPHY

Gerald Garner, of 4958 Santa Cruz St., San Diego, has been awarded the Grand Award Trophy for the 1965 Flower Show at the San Diego County Fair, Robert Lamp, Flower Show director has announced.

Mr. Garner had three entries in this year's show and placed well with all three of them. His 800-square-foot landscape garden exhibit was awarded a second place and his tropical landscape garden won a first and was described by one of the judges as "the outstanding display in the entire show." His feature orchid exhibit won second place in the judging. Mr. Lamp said that Mr. Garner "won the award for overall excellence and has always been an outstanding contributor to the show" for his work has improved steadily through the years. He has been active for about eight years and had started in the flower arrangement portion of the Junior Flower Show.

"Gerald Garner does all of his own planning, design and workmanship, and we are acknowledging our appreciation of his work by presenting him with this award," said Mr. Lamp.

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house and climb up the wisteria tree trunk. Then, bellying along, we edged our way across the top of the lathhouse to the lecture area. Lying in the vine over the heads of the people, we could observe and feel like the "invisible man."

Now that I look back on it, I'm sure that everyone, including our parents, knew full well that we were up above them but nothing was said. We were very mysterious about our whereabouts during lecture time until one day my brother in his desire to see a girl who had come to the lecture with her mother forgot to lie on a supporting beam. The lath gave way like brittle bones and my brother joined the lecture group, fortunately a little to one side of the public. After first observing that he wasn't hurt, my father calmly said, "Glad you could join us, son. Please take an empty chair," and went on with the lecture. Needless to say, I barely breathed during the rest of the talk.

The stone lantern is associated in my mind with our wonderful childhood, and it is to be hoped that our children will have their own happy reflections connected with it in our garden.

Plant Some Native Shrubs

by Helen V. Witham

The first botanical name this writer ever learned was "**Rhus integrifolia.**" You feel mighty smart saying that when you are about five years old. Sometimes your garden needs something less than a tree, larger than a clump of perennials, quieter than a flowering shrub. What you want is a bush; something with nice green leaves which do not interest pests and plagues; which can be pruned up or down or around, into a screen, a mass, a mound, a background; which will grow beside your lawn or on a dry hillside; which will impress your less knowledgeable friends as a handsome addition to your garden. They will ask: "What is it?" and then you, too, may toss off: "**Rhus integrifolia.**"

Its relative, the Sugarbush, **Rhus ovata,** has even handsomer, shinier leaves and clusters of pinkish flowers in winter, followed by red-brown seeds. This one grows naturally into a rather stiff, very dense, rounded shrub. Both of these are available at several of our local nurseries.

There is also **R. diversiloba,** but f'r hevvins sake, don't plant any of that, even though it does have the finest red leaves in the fall. You probably know it already by its common name of Poison Oak.

Ornamental Horticulture Course Offered

Offered for the first time in the Fall of 1965, the San Diego Mesa Junior College course covers a two-year curriculum in propagation, growing, maintaining, landscape uses and selling of flowers, ornamental shrubs and trees.

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Camellias

by Harvey Short

San Diego Camellia Society

July, August and September should command some of your most valuable time, with a keen eye searching for the thirsty plant. The younger grafts and newly potted seedlings will require **even moisture,** but not as heavily watered as the large mature plants with a more massive root system supporting quantities of leaves and the new crop of flower buds. Many people (often vacationing) fail to realize that proper **summer care** is the pay-off in the flowering season. Examples of varieties such as **Pink Perfection** and **Masterpiece** set extremely large numbers of buds. Sufficient watering and proper disbudding will help to prevent the buds browning and dropping in the early fall months, and aid them to develop to proper size and form without balling. What I am trying to emphasize is the fact that some varieties are "water drinkers" and need this extra attention at this time.

A light mulching of wood shavings, birch or pine and redwood mixed, helps to keep the roots evenly moist and cool. I find that the regular amounts of fertilizers given, seem to be adequate regardless of the mulch. Speaking of fertilizers, the second application should have been placed by early July, and again in early September for the final portion of either cottonseed meal, well-tested liquid food, or your special camellia food. Experience is the best teacher, and tried and true methods should be followed to avoid the risk of burn or defoliation.

I am occasionally (once a month) applying a spray to control the aphids on new growth and the beetles and measuring worms that riddle the leaf structure. Several sprays containing some percentage of Malathion seem to be controlling the pests.

The bud set is starting on most camellia varieties, and we are finding that some disbudding early in the season, is giving dividends with improved quality, size and better form of the flowers. Clusters of three to six buds are just too many to mature properly. Leaving two buds only to a tip (the most advanced one and a smaller one) will usually give best results. If the weather takes one, you still have a second chance for a perfect blossom.

Calendar of Care

August & September in Your Garden

by Ed Ogden

SUMMERTIME in Southern California emphasizes the value and beauty of tropicals — flowering, fruiting and foliage types. And points up the fact that we can enjoy the lush and exotic beauty of the tropics with all its flamboyant color and rich and bizarre foliage effects, without having to suffer with the heat and humidity of the true tropics. Most tropicals are good year-around performers in our region, yet are at their best now that nighttime temperatures are higher and the earth is warm in the root zone. And just at the time we're spending more time outdoors in patio and garden.

Quite a number of new species of tropicals are becoming available, either as brand-new introductions or the proven rarities now being grown for sale. A few examples: Among flowering trees, the **Monkey's Hand Tree,** *Chiranthodendron platanoides;* two **Tabebuias,** *T. pulcherrima* and *T. ipe,* with yellow and rose-pink bloom respectively; and the white-flowering form of *Jacaranda acutifolia.* (And some of the taller hibiscus varieties are being used increasingly in tree form, with growth from 20 to 30 feet.) New flowering shrubs include several **Grevilleas** including *G. noelii* and *G. thelemanniana;* the clear yellow almost everblooming **Thevetia** *thevetioides;* a new Veronica, **Hebe** "Co-ed," claimed by the patent-holder to be almost everblooming; *Ruellia devosiana* with its pink flowers in winter and spring, for shade; and several attractive new hibiscus varieties. In foliage plants there are several choice new palms and cycads; the variegated form of shell ginger, *Alpinia nutans; Tupidanthus calyptratus* and *Meryta sinclairii* for bold leaf patterns; and for both foliage and flowers the Crinum lilies and new bromeliads. These and others are well worth incorporating in the landscape to accent existing plantings, as conversation pieces and beauty.

The fall months statistically furnish the most sun in our areas, so that "summer" flowers can still be planted during this period for bloom on toward the holidays. Zinnias, asters, dwarf dahlias, celosia, marigolds and related warm-weather annuals will mature rapidly and produce heavily for months yet. And Labor Day weekend in beach communities, and toward the end of September in inland areas, marks the time for the very first plantings of cool-season flowers such as stock, snaps, Iceland poppies, pansies and in shady areas violas, cinerarias and primroses. Similarly, cool-season vegetables are often planted starting in September and reward with early and heavy crops if we don't have an excess of hot, dry weather in the fall.

Bulb-planting time starts in earnest during this period with availability of freesias, anemones, crocus, ranunculus, narcissus and daffodils, allium, sparaxis, leucojums, ixias, hyacinths, watsonias, tulips and the like. Remember that in bulb planting, bone meal is a uniform requirement and that manures should uniformly be avoided. Charts for planting depths are available from sources of the bulbs. And whereas requirements for sun and shade seemingly can be ignored with passable results in bloom, the bulb itself may well be lost if planted in the wrong location.

The summer weather brings with it an appreciation of the cool colors in the garden. White and blue in blossom, green in foliage, combine to create a pleasing coolness in aspect. The sight and sound of running water take the harshness out of the summer landscape, and where not practical can be suggested by the use of plants normally associated with water.

The preparation of soil remains one of the most controversial, expensive and difficult problems faced by gardeners in our areas. Quite simply, only a tiny fraction of the area contains anything that can be called soil—most areas are just rather poor subsoil or downright discouraging hardpan and adobe. However, a drive through one's neighborhood will give visual proof that the problem can be solved, and recent developments in materials and techniques make the solution less work and less costly and more reliable. Best practice shows a trend away from importation of topsoil and toward ripping, tilling and amending the subsoil to create something better than a layer of topsoil. A layer of topsoil grows new plantings beautifully until the roots reach the interface of subsoil below the surface, along with the layer of water at the interface, at which time trouble starts. Ripping by a tractor produces an irregular break in the subsoil, and ripping and tilling in organic matter provides an irregular and gradual transition from raw subsoil progressively to the richest and most

friable at the surface. Thus duplicating Mother Nature's formation of topsoil. The availability of redwood sawdust and shavings has been invaluable in this new approach. This redwood is also available in "nitrified" form in sacks, as is the new product Loamite. For small areas sacks of digested sewage sludge, leafmold, shredded firbark, peatmoss, and combinations thereof usually called "planting mix" are valuable if selected with relation to soil type and to the plants to be planted. By all means bear in mind that peatmoss makes its boldest claims in the degree of moisture retention, so be cautious about using it in heavy clay or adobe soils for most plants. Shredded firbark is now priced competitively with other amendments and is invaluable for lightening heavy soils, for its acidity and slow rate of breakdown. With most amendments a slow-release fertilizer should be admixed to compensate for consumption of nutrients during the breakdown of material into soil humus.

In addition to normal pest and disease control problems familiar to experienced gardeners, we are encountering increasing problems in this field due to new pests and diseases and to increased susceptibility of plants to problems not previously observed. Examples include the new water mold which rots the roots of fuchsias, and the recent mite problems with poinsettias. Recently we have been discouraging the use of the **Shore juniper,** *J. conferta,* in clay soils or in areas which receive frequent irrigation, and suggesting use of the very similar *J. littoralis* which seems to be immune to water mold problems. Established plantings of various plant species which are suffering from water molds and other forms of root rot usually respond well to a drenching of a mercury-based fungicide in the root zone. The heavy attacks of mildew produced by the overcast, humid weather earlier this summer seem to be helped most by the materials Karathane and Acti-Dione, the only two fungicides claimed to actually remove the fungus from foliage. A new broad-spectrum fungicide produced by Shell Oil Company and designated as ST 345 promises control of most fungi both in the roots and above ground, and should be available in consumer-sized containers soon. A test is being made with ST 345 in hopes of controlling the cypress blight which is killing off so many of the Monterey cypress and beginning to attack Italian cypress. Thus far no insects seem to have developed any appreciable tolerance for the new systemic insecticide, Cygon, and continuing work is being done to determine its safe use on a wider and wider range of plants. While the problems seem to be increasing, new developments in controls give us hope that we can keep ahead of these problems, and not have to wonder whether the science-fiction writers might not be right with their predictions of an insect-dominated world in the next century.

Warmer weather brings with it the need for heavier and more frequent irrigation of trees, shrubs, flower beds and lawns. Again we want to caution gardeners of the need for *deep* irrigation — trees and large shrubs put down roots 8 to 12 feet and more, and in average soil one inch of water penetrates less than a foot. So it's important to water less frequently but assure that sufficient is applied to soak in to the required depth. And one consideration is the rate at which different soils receive water; heavy adobe soils need hours to absorb an inch of water from sprinklers. An added important point is the fact that we had insufficient rain this past season to leach the soil of any accumulation of alkaline salts, so one or more deep irrigations should be applied just for leaching alone. —Ed Ogden

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Dahlias

by Larry Sisk
San Diego County Dahlia Society

LATE summer care of dahlias requires a watch for two problems which can be prevented, or kept under control—red spiders and mildew.

The way to handle the problems is to try to prevent them from appearing.

They not only plague dahlias;—if they get started, but they are a constant menace to roses and other plants growing around the homes of this semi-tropical section. The preventive care for dahlias also is recommended for other flowers.

Red spiders thrive and multiply when the weather gets hot, and especially if it is a dry heat. That's the cue to go into action with the spray. Malathion and a number of miticides are prescribed as spider deterrents, but in this area insecticides containing kelthane, (and this chemical used by itself), have proved especially effective.

The way to ascertain if the fading of the foliage green is caused by red spiders is to rub the underside of the leaves with tissue, or a bare finger; a red or pinkish stain tells the tale. Or, if the little pests get a head start, the problem can be identified by the filmy web on the plant, or web from leaves to stem. When that happens kelthane by itself, sprayed three times at four-day intervals, should clean up the garden.

As in the case of other pests, a regular spraying schedule before any trouble appears will prevent any infestation.

Similar precautions will keep mildew to a minimum. Among the steps of prevention, watering at night should be avoided; the plants should be as dry as nature permits by the time darkness settles.

Other preventive measures include preventive spraying, and dusting the ground under the plant with sulphur. The latter discourages the mildew that seems to come from the dampness of the earth.

Recommended sprays are those containing sulphur, copper sulphate, and the new all-purpose sprays that contain mildew antidotes as well as insecticides. Some dahlia gardeners also have success in preventing mildew by mixing captan, phaltan or fermate with their chosen insecticides. These, however, might have a tendency to leave disfiguring residue on the foliage, as will sulphur dust applied dry. Dusting is the last resort if the mildew persists.

Continued flowering of the garden makes these preventive measures worthwhile, whether one is growing dahlias, or roses, or whatever.

Additional requirements for a good summer and fall garden are regular and thorough watering and feeding. Plants are like humans in these. Water should be supplied about once a week. or oftener for light soil or if the top of the soil shows the effects of hot, dry weather; water deeply instead of a dash here and a sprinkle there.

The plants will respond to fertilizing every three to four weeks, with a final feeding in mid-September. Use a fertilizer that is low in nitrogen,—or bulb food, or, preferably, 4-10-10 or 5-12-12. Bone meal this late is not recommended because it takes about 90 days to become available for the plants.

Garden cleanup also is important for dahlias at this time. Any mulching material used should not contain decaying vegetation; this attracts insects and mildew. Grass clippings should be used only if permitted to dry thoroughly before application.

Removal of dry and drooping leaves near the ground will help your dahlia plants. In addition to improving the sanitation of the garden, this will promote better air circulation under the plants.

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Roses

by Carl Truby

President, San Diego Rose Society

GRANDIFLORA'S The Tall Roses

About 1950 a new group of Roses made their first appearance right here in the United States. The object was to make floribundas look more like hybrid teas by adding more hybrid tea to their parentage. These plants are, in theory, hybrid tea plants crossed with floribundas and perhaps crossed once again either with another hybrid tea or a grandiflora (as with the newest; Camelot). The grandiflora flower is usually much larger than the floribunda rose with many blooms being two to three inches across. One feature lost in the many crosses made to create the grandiflora is fragrance. Most grandiflora blooms are only slightly fragrant.

Presently there are about 23 grandiflora varieties of roses on the market and, regardless of other factors, they do have the definite advantage of a new name on the market. As for hardiness and resistance to diseases—the general belief is the grandiflora is somewhat more hardy than the other groups.

Popular grandiflora's are:

Carrousel; introduced in 1950 has a dark red velvety flower and dark green foliage.

Roundelay; introduced in 1954 has dark red blooms which are inclined to have double or confused centers. Vigorous grower, dark green foliage.

Merry Widow; introduced in 1958, dark red blooms with spicy fragrance. Vigorous bush with glossy foliage.

Queen Elizabeth; introduced in 1954, has large medium pink flowers. Very vigorous bush with leathery foliage. Excellent growing habits. (AARS)

Pink Parfait; introduced in 1960 (AARS 1961) has light pink blooms somewhat smaller than most other grandifloras. Foliage is semi-glossy and the bush grows to medium height of 40 to 48 inches. Pink blend color classification.

Montezuma; introduced in 1955, has large, long lasting, orange-red blooms which are slightly fragrant. Compact, tall growing bush with leathery semi-glossy foliage.

El Capitan; introduced in 1959, medium sized blooms of medium red color grown on long strong stems. Bush is very vigorous with dark glossy foliage. Slight fragrance.

Mount Shasta; introduced in 1963, has large high centered white blooms that are slightly fragrant. Bush is tall growing and vigorous with gray-green semi glossy foliage.

Olé; introduced in 1954, cup-shaped orange-red blooms that are slightly fragrant. Bush doesn't grow as tall as most grandiflora but does reach 40 to 48 inches the second year. Foliage is glossy and more disease resistant than many of the others in this class. Wonderful rose to brighten a corner or dark area in the garden.

Camelot; introduced in 1964, AARS in 1965 and newest of the grandiflora class. Has large, shrimp-pink blooms that are spicy fragrant. Vigorous growing bush with dark red-green foliage.

Grandifloras may not be the answer to all your garden problems but because of their height and growing habits they have a definite place in the landscape. Many European countries list our grandifloras as floribundas, however. Because of their inclination to grow tall and produce large, long stemed, hybrid tea type blooms, most American authorities believe them worthy of a separate class. lieve they are worthy of a separate class by themselves.

The first All American Rose Selection from the grandiflora class was **Queen Elizabeth** in 1955. The pollen cross used to produce **Queen Elizabeth** was a hybrid tea named **Charlotte Armstrong** and a floribunda named **Floradora.** It is interesting to note since that cross both Floradora and Queen Elizabeth have figured very prominently in the development of several newer grandifloras including the white **Mount Shasta.** Even more unusual is the fact that the floribunda rose, Floradora, produces a flower with many split and confused centers; however, the color holds well and the fragrance is pleasant.

Recently the American Rose Society changed its rules, and now allow grandifloras to be shown disbudded. This will not only increase the number of blooms eligible in this class but will improve their overall appearance.

This writer believes the grandiflora class rose has a promising future especially for the gardener who demands large blooms. Hybridizers have already crossed two grandifloras with excellent results. (**Roundelay** x **El Capitan** which gave us **Olé,** a rose with spectacular orange-red color). Perhaps soon it will be **Montezuma** x **Camelot** and who knows how many others yet untried or tested.

In conclusion, we feel a class of rose with less than 25 varieties has made an indelible mark in the rose world in 15 short years and with more and more rose growers looking for a rose to cut or to admire in the garden the GRANDIFLORA CLASS is here to stay.

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Irises

by James E. Watkins

President, San Diego-Imperial
Counties Iris Society

THIS is a relatively easy time in the iris garden, with mostly housekeeping chores to do, watering sufficiently during the hot summer months, keeping dead leaves cut off, weeding, and the like. Of course, that weeding can be a big job if it gets ahead of you. Some people use a weed seed deterrent between rows of irises, others hoe the weeds out, and some find great satisfaction in releasing inner tensions by ripping them out of the soil with a trusty trowel. Reblooming irises should have an occasional light feeding if they are to rebloom reliably.

The chore of dividing old irises and planting new ones is over. Do you have some places to fill in, or do you want to branch out into other iris fields? Now is the time to be ordering several kinds that are all too often overlooked by gardeners. And each has its virtues.

Climbing constantly in popularity are the spurias, and southern California is an ideal place to grow them. At an iris show it is often amusing to hear someone say yes, the irises are fine, but those orchids over there are wonderful, "those orchids over there" being spuria irises. Actually, they are not like orchids, but there are people who think anything with an exotic shape is likely an orchid, and certainly the spurias can be exotic, both in form and color. It has been said that spurias are presently where bearded irises were twenty years ago, from a breeding standpoint. If so, there are marvels to come, for many of today's spurias will draw sighs of delight when seen in a flower arrangement or in a corsage. They hold up well, hence their popularity for these purposes, and more and more of them will be seen in the florists' shops. It is not hard, though, to believe that those marvels will come in advancement when one has the opportunity to see new seedlings by Escondido's Walker Ferguson, whose hybridizing efforts brought forth this year a bewildering number of improvements in almost every color, white, yellow, bronze, and all shades of blue, many veined like rare butterflies. They bloom about the same time as most of the tall bearded, and planting time here is usually in October. They demand little care, and even when neglected will put forth blooms that win awards at the shows. They generally take a little longer to become established in the garden, but have to be divided much less often than the bearded varieties.

Equally easy to grow are the bulbous irises, primarily the Dutch, Spanish and English. It has been said that if you can grow Dutch irises in your area, you can't grow English, and vice versa. I can't vouch for this except to say I don't know anyone growing the English. It is also said that the bulbous iris will have to be replaced every few years, because of disease or weakness, but in my own garden I have had Dutch and Spanish irises for many years that have thrived and multiplied, again with similar neglect. The Dutch and Spanish are very similar, the Spanish being rarer, and it was interesting to learn that the judges at a San Diego flower show recently disqualified a bonafide Spanish on the assumption it was Dutch. Again they are remarkably good as a cut flower, and if refrigerated they will hold up for as much as two weeks, sometimes a fine thing when they bloom prior to the iris show or a special event you might want them for. Most varieties bloom in April; planting time is in the fall; and they are generally inexpensive.

Probably next in popularity nationwide are the Siberian irises, but here I certainly am no expert. It is apparent that these won't thrive on neglect. I had about eight varieties at one time in a general flower border. All soon died out except **Caesar's Brother,** reportedly the easiest to grow, and though it bloomed it was not my idea of a beautiful flower, and I soon discarded it. Since that time I have seen Siberian irises that made my mouth water to try again—and not to neglect them! They demand an "acid bed" to grow well, one probably doctored with soil sulphur, oak leaf mold, and fed with an acid fertilizer such as is used on azaleas and camellias. They also want less direct sunlight than the bearded iris.

Orchids

by Byron Geer

San Diego County Orchid Society

The hottest days of our calendar year are just ahead of us, and it is a most critical season for the Orchids. True, they revel in the heat if other conditions are right, but they develop an insatiable thirst. Shriveling bulbs and dry, parchment-like leaves are sure signs of trouble and the real Orchid lover will make certain that they don't appear. Watering will have to be stepped up, but only good sense will tell us just how much. Daily foliage misting is certainly in order, but don't make the mistake of thinking that this is an acceptable substitute for pot watering. Such a daily misting will only moisten the top half inch of compost. Beneath this, in the root zone, your plants will probably be bone dry. If they remain dry for any period of time, the roots will die and top leaves start to dry out and fall off. You'll end up with a pot of leafless back bulbs and not a chance in the world of bloom spikes next season. The question of how much water is unanswerable. This will depend primarily on the compost and the exposure, but a safe rule of thumb is *never* dry. If this means daily watering, so be it. Cattleyas in a closed greenhouse with humidity relatively high will not require the same watering that Cymbidiums grown out of doors and wind dried will need, yet the same rule applies to each. *Always moist.* This matter of watering adequately during warm weather is the greatest hurdle to be taken, yet the balancing factors must be considered too. For Cymbidiums especially, feeding is important in order to ripen and mature the new growths. This is the prelude to initiation of new bloom spikes. Continue with high nitrogen food through September, then change over to a high phosphorous formula for plants of blooming size. For all the Orchids, keep the light intensity as high as it can be without burning foliage; and provide air movement and atmospheric humidity if possible.

Balanced feeding, watering, air, light and humidity should pay off in bigger, better plants and more flowers. If it doesn't, you'll simply have to think back and recall what you did *not* do.

IRISES *continued*

Not well-known here, but amazingly easy to grow despite their natural habitat in marshes and bogs, are the Louisiana irises. They respond well to the "acid bed" treatment also, and like less sun, but I have grown them in the general flower border without special treatment. They are so attractive I find it necessary to enlarge my collection and am ordering a number of new ones this year. I have heard experienced flower arrangers say that the Louisiana needs no "arranging," that one stem with two or three blossoms open is an arrangement in itself. They like moisture, but will do well without an exorbitant amount. They may bloom along with the tall bearded irises, or for some they will bloom a week or two later, and they are planted in the fall. They are not readily available locally, but there it at least one California firm handling a number of them. Most named varieties are relatively inexpensive.

More difficult yet to find are the so-called "native irises," primarily for this area, the douglasianas. They are found largely in the mountains of northern California and in Oregon. Some are beautiful "as is," but hybridizing efforts have improved them tremendously, and there are named varieties on the market. They resent being transplanted, and this can only be done in this area in December and January. They will do best in semi-shade in the hotter areas. Probably the easiest way to grow them is to plant seeds in peat pots and then transplant pots and all at the correct time. Seeds easily yield a hundred per cent germination. They are fragile appearing, but richly colored and patterned, and always command attention, even among the more knowing iris growers who see them for the first time.

I had never considered growing Japanese irises here, and was amazed to see nice blooms in a local garden where they had no special care. They were one-year plants on a shady hillside with filtered sunlight through trees that had probably built up a nice supply of leaf mold at their feet. Since then I have inquired about them and found one who has grown them successfully with the "acid bed" treatment, along with Louisiana irises, and with plenty of moisture. I have heard of a grower in Los Angeles who grew them in sunken beds that could be flooded with water often, and of success in growing them in containers that could be kept constantly moist during the crucial period before bloom time. There are reports that they will have to be replaced in this area every few years. They take more care than many of the above, but if you have seen their blooms you may decide they are worth it.

So branch out! It is well with any gardening hobby to try something new each year. There are many more varieties of the genus iris, but the above are the primary kinds, the ones you can succeed with here if treated correctly, and a refreshing "change of pace."

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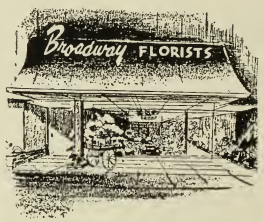

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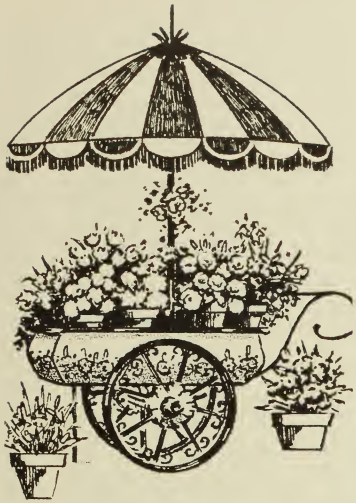

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Fuchsias

by Morrison W. Doty
San Diego Fuchsia Society

With the advent of August and September the Southern California gardener's main chores may be adequate moisture and pest control. Without the cool protection of the long morning cloudiness, fog, or haze that has persisted far into July in late years, we may need to check our plants every day for moisture, and possible insects. Sharp, fine water spraying of the entire plant both beneath and above the foliage will dislodge many pests, and refresh it amazingly. However, this is not a substitute for the deep, slow watering that all plants need in this area for their life-blood, and the flushing out regularly of injurious minerals that come in our Colorado River water. Much of our soil is best watered with a soaker around plants in the ground, a few days apart, but basket or container plants usually need water every day or two at this time of year, or if warm winds come. The earth in container plants may be dry on top before watering for a short time without harm, but drying out completely may well cause root die-back, or death of the plant. Metal, or roofing material liners in containers can conserve the moisture needed to save a plant. Fog nozzles to create a misty atmosphere in very hot weather around your Fuchsias will simulate the rainforest habitat they thrive in. The idea that a "Fuchsia cannot be over-watered if well drained," is however, not true, especially in the case of new cuttings. Keeping a starting flat very wet in early Spring, or Fall (when most cuttings are made) may cause damp-off or die-back, losing the new plants. They may be watered several days apart, depending upon the warmth within their sun-filtered nook, but kept always damp underneath.

But white fly, red spider, aphids, mites, or thrip may attack under-par tired plants in late summer heat, causing leaf curl, discoloration, or defoliation, especially if there has been neglect in watering and feeding, or infection by other diseased plants. Sprays containing malathion (found at all garden supply places) control most infestations easily. However, it is best to use some *preventive* sprays or powders beforehand that control the pests mentioned. Use insecticides milder, rather than stronger, than directions, lest you defoliate, or retard, sensitive Fuchsias.

For feeding, a good standard liquid fish-base fertilizer every two or three weeks is best for bush and tree Fuchsias. Feeding as often as every week is recommended for baskets and containers, if hot weather watering depletes their nutrition, and you want more bloom. A higher phosphate formula, such as 5-10-5, or 4-10-6, instead of the high nitrate ones used for growth is advised for bountiful summer bloom. Force feeding, as with ammonium sulphate is not recommended for the amateur usually.

Fuchsias in this area are very commonly pruned in the Fall now, especially by nurserymen, who claim less die-back and danger of frost than in Spring pruning. They are usually cut back to about a third, perhaps in October, and cuttings saved at that time from most prized and vigorous plants, as per full directions in our next issue.

This is the time of year to live more in your garden. Let your plants know you love them with the care you give them. Have places to rest comfortably among them, and you'll find pleasantness and peace from all the world's worries.

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